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PAPER TRADE JOURNAL

PAPER
THE PAPER MAGAZINE
Is Combined with Paper Trade Journal

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"Good Pulp for Good Paper"

JOHANESON, WALES & SPARRE, Inc.

WOOD-PULP AGENTS

250 PARK AVENUE (Cor. 46th Street) NEW YORK

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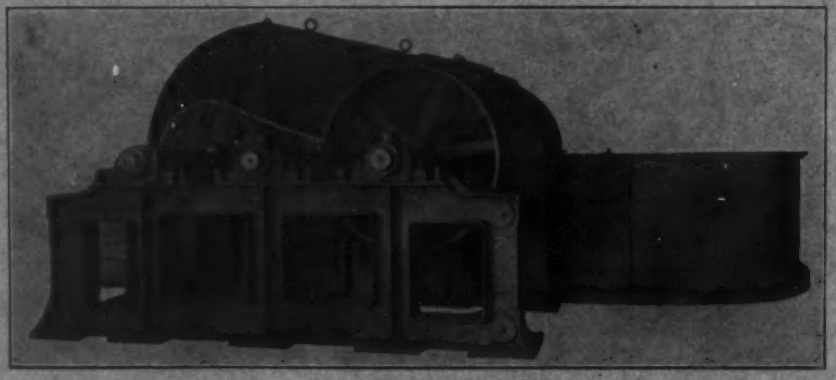

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PAPER TRADE JOURNAL

ESTABLISHED 1872

THE INTERNATIONAL WEEKLY OF THE PAPER AND PULP INDUSTRY AND THE PIONEER PUBLICATION IN ITS FIELD

FIFTY-THIRD YEAR

Published Every Thursday by the

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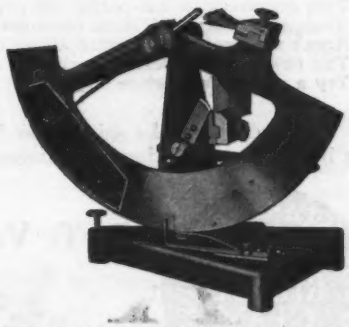

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The new contract season is rapidly approaching.
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These clays can be shipped in 50 pound paper bags, convenient for handling in beater room where requirements are not large.

R. T. VANDERBILT CO., Inc.

50 East 42nd Street

New York

ESTABLISHED IN 1872

PAPER TRADE JOURNAL

With Which Is Combined

Vol. LXXXI, No 14 — PAPER — Thursday, October 1, 1925

The Magazine of the Paper Industry

Chemical Industry Show is a Notable Success

Tenth National Exposition Which Opened for the Week at the Grand Central Palace, New York, on Monday Last, Proves Rich in Innovations and Educational Features — Many Elaborate Displays of Great Interest to the Pulp and Paper Industry Attract Much Attention—Worth While Papers Read at Technical Association Meeting

With more than 300 exhibitors taking part and with numerous innovations of educational and scientific importance, the tenth Exposition of the Chemical Industries opened on Monday afternoon at the Grand Central Palace, New York, occupying three complete floors of the large building. Though the Exposition is technical to a great extent, nearly every booth presents features of unusual interest and instruction.

A greater number of processes than usual are illustrated and actually demonstrated. Many of these processes have been developed in their entirety in the two years that have passed since the last similar presentation. There are others, which have been known for a considerable time but are now being shown in the most complete detail.

Court of Chemical Achievement

One of the features which is attracting a great deal of attention is the Court of Chemical Achievement. This section occupies a large percentage of the space on the third floor of the Exposition. It contains new products and processes perfected by leading chemical manufacturers during the last two years. The exhibits in this section are quite distinct from the general exhibits in the show and each one was passed upon by a special committee before being admitted to the Court.

Several of the Federal Departments at Washington, various institutions of learning, and many important corporations and individuals, are among those whose discoveries have been honored by selection as basic advancements in the field of chemical research. The Chemical Warfare Service, for instance, has turned its experiments in the direction of peace-time endeavor, and shows its method of utilizing chlorine, one of the most deadly of gases, in the treatment of respiratory diseases. It displays, too, newly developed forms of gas masks, valuable in industry, as well as war. Of a strictly war-like nature, however, is its method of producing the quickest and heaviest smoke screen for vessels engaged in battle.

The Department of Agriculture illustrates by a working model its recently developed method of preventing dust explosions in manufacturing plants through the use of small quantities of inert gas. There is also shown its recently developed method of destroying weevils and other pests in grains through the use of non-inflammable chemicals.

Some Weighty Exhibits

The Exposition runs the gamut in size of exhibits from enormous machines weighing 25,000 pounds to items of microscopic smallness. There are wonderful displays of precision instruments, some of which are capable of separating an inch into a million parts and others that weigh accurately atoms so small that the eye can hardly discern them. Marvellous as are the things that the chemists have discovered, theirs is a profession in which the impossible of today becomes the commonplace of tomorrow. The general attitude that nothing is impossible is thoroughly demonstrated at this unique exposition.

Unique Motion Picture Program

Realizing the power of the motion picture as an educator the promoters of the chemical show have arranged a program of pictures for 2 o'clock each afternoon and 7.30 each evening. Educational sermons presented through this medium include "Ancient and Modern Paper Making", 2 reels, by the courtesy of the General Electric; "Chemistry beyond the Microscope", 1 reel, by the courtesy of the General Electric Company; "A Trip through Filmland", 2 reels, by the courtesy of the Eastman Kodac Company; "The Story of Portland Cement", 1 real, by the courtesy of U. S. Bureau of Mines; "The Story of Sulphur,,' 2 reels, by the courtesy of U. S. Bureau of Mines; "A brief sketch of Thomas A. Edison", 3 reels, and many other interesting industrial subjects.

Numerous societies and trade organizations have planned meetings in New York during the Exposition which undoubtedly increasing the attendance of technical men and those directly interested in the chemical industry. The proceedings of these groups will culminate in the Chemical Industries dinner which will be held at the Hotel Roosevelt on Thursday evening, under the auspices of the Salesman's Association of the American Chemical Industry. The committee for this dinner includes representatives of practically all of the leading chemical and allied industries.

Pulp and Paper Meeting

A meeting of the Technical Association of the Pulp and Paper Industry was held on Wednesday afternoon at the Exposition, when the following interesting and instructive papers were read:

"The Development of the Save-All," G. W. Repetti, The Dorr Company.

"Acid Resisting Alloys Used in the Paper Industry," Victor Hybinette.

"Heat Insulation in the Pulp and Paper Industry," E. C. Rack, Johns-Manville, Inc.

"Paper Dyes for Clear Back-Water," John R. Roberts, E. I. Dupont de Nemours & Co.

"Speed Reducers for Paper Mills," J. R. Shays, Jr., Foote Bros. Gear & Machine Co.

"An Insulated Paper Mill Roof," C. J. Beckwith, Johns-Manville, Inc.

"Evaporating Black Liquor," R. W. MacGregor, Ernest Scott & Co.

"The Meaning of Hydrogen on Concentration and Its Applica-

tion to the Paper Industry." W. A. Taylor, LaMotte Chemical Products Company.

"New Developments in Recovery and Finishing of Paper Pulp," K. A. Pelikan, National Homogenizer Corporation.

"Rubber Tank Linings, Hard Rubber Suction Boxes and Ductor Blades," Norman Madge, U. S. Rubber Co.

In connection with the Exposition free courses in elementary and advanced chemistry are being given daily under the direction of Dr. William T. Read of the College of Technology, Lubbock, Texas. Several hundred students registered for the courses.

Among the many exhibits of special interest to the paper industry are the following:

The Bristol Company

The Bristol Company, of Waterbury, Conn., show a great number of recording instruments and feature in their exhibit the new Bristol Automatic Temperature Control for controlling the temperature of Oils, gas, steam and water. It is a substantial fact that with the use of these automatic controllers an actual saving of 25 per cent fuel can be accomplished over hand control. Bristol's Recording Liquid Level Gauges also attract much interest. This useful recorder automatically records the depth of water or other liquids in tanks, reservoirs, rivers, canals, sewers, forebays and tail races, also the depth and rate of flow of water over weirs and volume of liquid in tanks. No more accurate or simpler means can be provided for holding liquids at constant level and for taking stock of liquids on hand. The company's new electric tachometer for keeping "tabs" on printing machinery production attracts wide attention from members of the paper industry.

The Dorr Company

One of the most wonderful and comprehensive exhibits is that of the Dorr Company, of 247 Park avenue, New York. Here is shown the Dorr Traction Thickener, consisting of a slow moving mechanism set in in a tank or basin. The thickener is generally used for continuously dewatering or thickening any fine material suspended in liquid. The machine is universally used in cyaniding, either in connection with continuous counter-current decantation or for thickening ahead of filters; in concentration mills for dewatering ahead of tables or flotation cells and also for collecting and dewatering concentrates and recovering water from tailings.

The Dorr Bowl Classifier is also creating great interest. This type of classifier is particularly adapted for separations at 100 mesh and finer, where an absolutely clean sand is required, or where it is desired to produce a finished product all 300 mesh and finer. It is also suited to conditions where a relatively large overflow capacity is desired in comparison to the raking capacity. The Dorrco Suction Pump is shown in operation. The Dorrco is a self-contained flat valve diaphragm pump adapted to handle slimes, pulps and sludges, at any dilution at which they flow.

An interesting feature of this fine exhibit is a large globe showing Dorr installations throughout the world, including numerous paper mill installations. A chart is also displayed, giving a tabulation of materials treated or produced annually in plants which have adopted the Dorr methods. This chart shows that no less than 50,475,000 pounds of pulp are recovered annually by this invaluable system.

E. I. DuPont de Nemours & Co.

The E. I. DuPont de Nemours & Co., is well represented in the Court of Achievement, and many recent discoveries of this famous concern are shown. Some of the new products exhibited are: DuPont Oval Emokeless Shot Gun Powder, Low Freezing Nitro Glycerine Explosives, Vat Dyes, Duco-a pyroxlin finish to protect and beautify surfaces, an DuPont Rubber Vulcanization Accelerators.

The Eaton-Dikeman Co.

A very pleasing display is given by the Eaton-Dikeman Company, of 537 Pearl street, New York. At this booth is demonstrated the use of filter paper with filter cloth. Plant managers are undoubtedly turning more and more to filter papers—with or without filter cloth—as the solution of their most difficult filtering problems. In addition to a comprehensive exhibit of E. & D. filter papers is shown the "J. Green" British filter paper, for which the Eaton-Dikeman Company are the sole agents.

The Flexible Steel Lacing Co.

At the booth of the Flexible Steel Lacing Company of 4607—3d Lexington street, Chicago, is displayed the well-known Alligator Steel Belt Lacing for machinery belting. Alligator steel lacing is adapted for use on leather, rubber, balata, cotton, or canvas-stiched belting of any width or thickness, and will hold secure the size belt it is designed for. Flexco Lamp Guards are also displayed at this interesting exhibit.

Foote Bros. Gear & Machine Co.

An exhibit of unusual interest is that of the Foote Brothers Gear and Machine Company, of 215 West Curtis street, Chicago, where gear of every description is displayed. A valuable method of stepping down electric motor speeds is by means of the Foote Brothers Speed reducers, which are dust proof and fool proof and are ably demonstrated at this booth, including Worm Gear and Spur Gear Speed Reducers. An A. C. motor in actual operation is attracting the notice of many visitors.

General Electric Co.

At the large space occupied by the General Electric Company, of Schenectady, N. Y. many products of this world-renowed organization are shown. The operation of Induction Motor Model No. 120598 is arousing great interest among visitors to the show. Another feature is the equipment used for automatic arc welding. The electric welder is specially adapted to the building up of worn-out shafts and is of great interest to paper manufacturers. The welder also does efficient work in repairing large tanks. General Electric Control provides ease and flexibility in the operation of electric motors. Starting, stopping, or change of speed can be handled from various remote points, or if desirable, can be made entirely automatic. All possibility of human error is thus eliminated.

Hendrick Manufacturing Co.

Preforated metal screens in steel and alloyed metals for pulp and paper mills are displayed by the Hendrick Manufacturing Company, of 65 Dundaff street, Carbondale, Pa. The Mitco Interlocked Steel Grating is also an interesting feature of this booth where a steel grating staircase arouses much interest and attention, The Mitco interlocked gratings are neat in appearance, with flush face, easily cleaned and painted, and free from clogging, on account of the rectangular openings, with no acute angles to catch and to hold refuse. At the same time they give maximum light and ventilation.

LaMotte Chemical Products Co.

An elaborate display of Hydrogen Ion Equipment is shown at the booth of the LaMotte Chemical Products Company, of Baltimore, Md. The importance of Hydrogen Ion Concentration in the Paper Mill was well described by Merle B. Shaw, Associate Technologist, Bureau of Standards, in an interesting article which appeared in THE PAPER TRADE JOURNAL of September 3, last. This exhibit is very attractively arranged and pleasing to the eye and is attracting great interest from visitors to the show.

Mathieson Alkali Works, Inc.

A unique feature at the excellent exhibit of the Mathieson Alkali Works, Inc., manufacturers of heavy chemicals of 250 Park avenue, New York, is a Mathieson Multi-Unit Tank, carrying 15 one ton units of liquid chlorine. The exhibit includes specimens and literature on "Eagle-Thistle" Anhyrous Ammonia, Aqua Ammonia, Caustic Soda, Soda Ash, Liquid Chlorine, Bleaching Powder, Bicarbonate of Soda, Modified Virginia Soda and Purite, together with the Commonwealth products: Benzoate of Soda, Benzoic Acid,

MATHIESON System

A New Protection for Mathieson Chlorine Containers

AS a result of exhaustive tests conducted at our Niagara Falls works, we have adopted aluminum paint as the best protection for the Chlorine containers of our Multi-Unit and Single-Unit tank cars.

Aluminum paint shows high resisting qualities against rust, weathering, fumes and gases, and gives better protection and longer service than ordinary paint. Its bright metallic surface adds greatly to the appearance of the equipment it covers, and possesses the added advantage of reflecting most of the sun's heat to which containers may be exposed.

We believe Mathieson customers will appreciate this new feature because of its greater serviceability and as an indication of the pride we take in our Liquid Chlorine equipment.

Visit our Booths, 326-327-330-331, at the Tenth Exposition of Chemical Industries, Grand Central Palace, New York, Sept. 28th to Oct. 3rd.

The MATHIESON ALKALI WORKS Inc.
25 WEST 43rd STREET NEW YORK CITY
PHILADELPHIA PROVIDENCE CHICAGO CHARLOTTE

EAGLE THISTLE PRODUCTS

Deal Direct with the Manufacturer

Bicarbonate of Soda
Liquid Chlorine-Caustic Soda

Sesquicarbonate of Soda
Bleaching Powder-Soda Ash

Benzaldehye, and Coumarin. Mathiesin Ammonia cylinders, Liquid Chlorine cplinders and other containers are also on display.

Members of the sales organization who are attending the booth at various times during the week include the following: J. A. Kienle, J. W. Boyer, R. J. Quinn, E. E. Routh, W. D. Marshall, P. DeWolf, J. B. Peake, W. A. Fields, J. H. MacMahon, J. D. MacMahon, R. C. Staples and E. M. DeBaun.

Nash Engineering Co.

One of the finest and most comprehensive machinery displays at the exposition is that of the Nash Engineering Company, of South Norwalk, Conn. Special interest is being taken in the new No. 8 Nash Hytor Vacuum Pump directly connected to G. E. Synchronous Motor, of which great things are confidently expected. Here also are shown the Jennings Hytor Flat Box Pumps, designed specially for paper mill service the Nash Hytor Compressors for air and gas, and the Jennings Hytor Sewage Ejector.

The Nash Engineering Company for many years have specialized in the manufacture of vacuum pumps for the pulp and paper industry. The service for which these pumps have been applied, includes creating a vacuum on the flat boxes on the wires and felts of Fourdrinier and sulphite drying machines and on the felts of cylinder machines, as well as creating a vacuum on the suction couch and press rolls. It is an interesting fact that paper mills in the United States whose production totals 81% of the total paper manufactured in the States have installed from 1 to 130 pumps of Nash manufacture in their mills.

New England Tank and Tower Co.

Various types of tanks in operation attracted the attention of the visitors to the booth of the New England Tank and Tower Company, of Everett, Mass. This instructive exhibit was of special interest to members of the paper industry. The organization specialized in agitator drives for stock, colors, fillers and sizes, of standard and special design. Photographs shown at this booth included a reproduction of a settling tank for pulp recovery.

Oliver Continuous Filter Co.

At the booth of the Oliver Continuous Filter Company, of 503 Market street, San Francisco, Cal., the uses of the Oliver Continuous Automatic Vacuum Filters, Horizontal Continuous Filter Tables, Olivite Acid Pumps, Oliver Pulp Washer, and other products of this renowed house are ably demonstrated. The Oliver Pulp Washers are showing very gratifying results on paper mill operations and are becoming universally adopted.

Philadelphia Quartz Co.

An interesting display of Silicates of Soda is presented at the booth of the Philadelphia Quartz Company, of Philadelphia. Products in which Silicate of Soda are used are also displayed. The various uses of ilicate are due to the different kinds of properties that are developed in the different brands. Some brands have great values as adhesives and are used for paper, wood, glass, metal and pottery. Likewise some are used as binders for various materials. Another general class of uses is as protective or preservative coatings for wood, paper, concrete, etc. Still other important uses are due to certain special chemical properties.

Standard Soapstone Corp.

A complete soapstone installation is shown at the booth of the Standard Soapstone Corporation, of 150 Broadway, New York, successor to the Phoenix Stone Company, Inc. The many uses of soapstone are ably demonstrated at this novel exhibit.

Texas Gulf Sulphur Co.

One of the greatest centers of attraction at the show is the exhibit of the Texas Gulf Sulphur Company, of 41 East 42nd street, New York. Here is displayed an artistic animated and illuminated picture of the Golf Hill, Texas, sulphur mine in operation, showing the complete process of manufacturing sulphur. This sulphur mine is the largest known deposit of its type. This wonderful panorama is the work of the Seen-in-Action Company, of Chicago.

The W. S. Tyler Co.

A large and comprehensive exhibit of wire cloth is shown at the booth of the W. S. Tyler Company, of Cleveland, Ohio. Delays of production in hundreds of plants have been saved by first aid shipments of woven wire screen from the Tyler organization. The wire employed in the screen is specially prepared with a view of producing long life. The samples of wire cloth on display include Fourdrinier cloth.

United States Rubber Co.

Featured in the Court of Achievement is an exhibit of spongy sprayed rubber the product of the United States Rubber Company, of 1790 Broadway, New York. The development of Latex Sprayed Rubber has progressed very rapidly from the data of its conception through laboratory scale experimental work and semi-commerical development which was carried on at the General Laboratories of the United States Rubber Company until this year, when practically the entire crude rubber production of the company's great plantations in Sumatra and Malaya will be in the form of latex sprayed rubber.

United States Testing Co.

A Mullen Paper Tester specially designed for the paper industry and manufactured by B. F. Perkins & Sons, Inc., of Holyoke, Mass., is demonstrated by the United States Testing Company, of 316 Hudson street, New York, at their instructive booth. The United States Testing Company mawes misroscope examinations, chemical analysas and physical tests of paper under standard conditions of humidity and temperature by official standard methods of the pulp and paper industry.

Westinghouse Electric and Manufacturing Co.

World-famous Westinghouse Products were attractively displayed at the elaborate booth of the Westinghouse Electric and Manufacturing Company, of Pittsburgh, Pa. Some of the many features of this remarkable exhibit, many of which were shown in actual operation, were: The Westinghouse Radio Transmitting Tube; Thermonic Photo-Cell Light Relay; Ductile Thorum, a Westinghouse achievement of the Research Department of the Westinghouse Lamp Company; Squirrel Cage Induction Motor; Westinghouse Controllers; Westinghouse Electric Furnaces and New Alloy Steel for Permanent Magnets.

Paper Specifications Committee To Meet

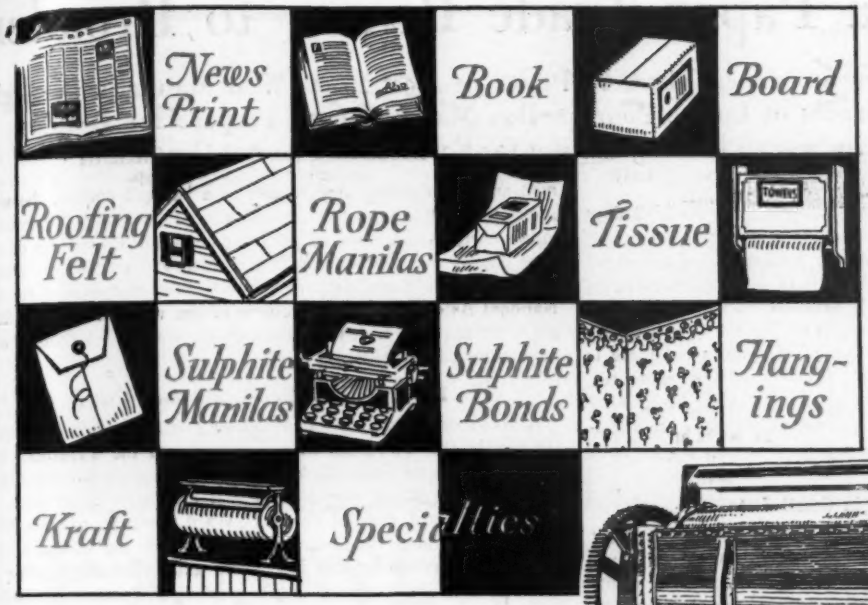
[FROM OUR REGULAR CORRESPONDENT]

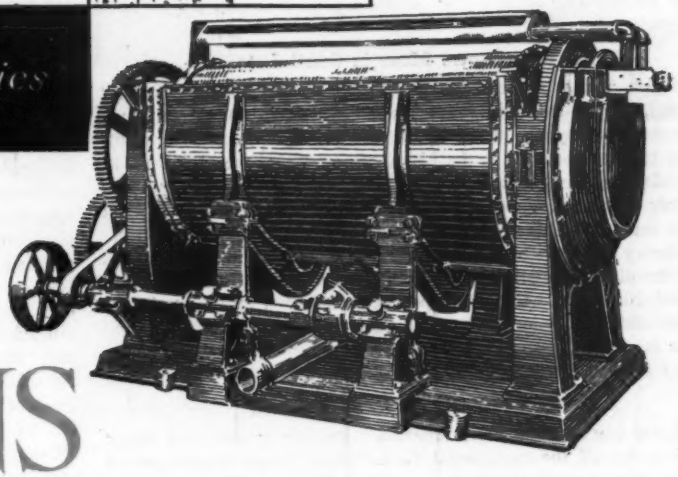
WASHINGTON, D. C., September 30, 1925.—It is expected that the first meeting of the Paper Specifications Committee of the Joint Congressional Committee on Printing will be held either the latter part of this week or early next week.

This is the Committee which drafts specifications for the annual supply for the Government Printing Office and its report has to be in the hands of the Joint Committee when Congress convenes early in December. Considerable preliminary information has been tabulated by officials of the Government Printing Office.

Cost Association Meeting Postponed

The annual meeting of the Cost Association of the Paper Industry, which had been scheduled to take place on October 22 and 23, has been postponed until November 19 and 20, when it is to be held at the Statler Hotel, Buffalo, N. Y. Tax Revision in the Paper Industry will be one of the most important subjects discussed at the meeting and Joseph Albrecht, of Buffalo, is to give an address on this matter. Mr. Albrecht is a well-known expert on tax law, who is retained by the Hammermill Paper Company for their tax work.





BIRD SCREENS

Throughout the Industry—

Quantity production of uniform quality of paper is essential to the success of every paper mill because of the exacting demands of modern competition.

And this applies not only to certain branches of the paper industry but to the entire industry.

The part that Bird Screens have played in making this possible is indicated by the fact that 17,000 tons of almost every variety of paper pass through Bird Screens daily.

If you are not yet using Bird Screens, may we send you the facts concerning their application to ***your*** kind of paper?

8469

BIRD MACHINE COMPANY

South Walpole Massachusetts

BIRD MACHINERY

Philadelphia Paper Trade Begins to Broaden

Steady Tone Experienced in General Market—Prices in Most Lines Well Maintained—Slight Advances in Some Grades of Coarse Papers—Box Manufacturers Prepare for Holiday Season—Paper Industry Planning Exhibit for Forthcoming Sesqui-Centennial

[FROM OUR REGULAR CORRESPONDENT]

PHILADELPHIA, Pa., September 28, 1925.—With cooler Fall days the paper trade begins to broaden and although business lacks that snap which in normal times attends the resumption of industrial activities at this season, it nevertheless is of a more encouraging trend. There is no impressive trade demonstration that will lead the dealers to believe that the industry is on the eve of a booming seasonal activity for either the fine or coarse grades but there is a steadier tone to the general market. Orders still are cautiously placed and what is lacking in volume is made up in the broadening of the small lot purchases. Prices in most of the lines are steadily maintained and in a few of the grades of coarse papers have slightly advanced.

Fine Papers Move in Small Lots

With a slowly recuperating printing market during the past week, the Philadelphia paper trade reflected the slight improvement by an equally increased demand for many grades of printing papers consumed by the job plants, such as some of the bonds, labels, writings, higher priced coated, books, lithographing and other lines that have been more or less slow sellers throughout the summer months. Advertising houses allied with the printing industry also have been in the market for many of the grades used in the direct-by-mail class of literature and in announcement and catalogue stocks. Small roll products consumed by the stationery and office equipment trade and by users of die wiping papers and for mechanical accounting purposes were among the paper stocks that showed decided improvement during recent days.

Bag and Box Markets Improved

Local bag manufacturers reported a steadier demand and firmer prices for all the commercial lines. Those larger manufacturers who enjoy a national patronage, and manufacture in tonnage lots, have been the most active. Some of the plants have been obliged to further extend their working forces to meet requirements. Of course this applies to those manufacturers catering to special commercial bags not ordinarily found in the majority of plants and where a general assortment in all sizes and styles are produced.. Paper box manufacturers are now getting ready for the holiday business and fancy papers, boards and other requisites of the box trade show the broadening of operations in this field.

Box Manufacturers Meet in Convention

Reading, Pa., was the scene of the annual gathering of the Central and Eastern Divisions of the National Paper Box Manufacturers Association, when, during the week, more than 100 box makers from the Eastern and Central States met at the Eagle's Mountain House and the Berkshire Hotel to discuss trade and association affairs and to commingle in a social hour or so, between meetings, at the dinner table and in outdoor pastimes. On Tuesday morning the business program opened with an address by President Frank Stone on Association activities and then followed a business meeting, succeeded by a conference, in the form of open forum discussions, with Commissioner Howard P. Beckett leading the opening topic on "Sales." Wednesday was devoted to talks by J. R. Blocher of the F. N. Burt Company, Buffalo, N. Y., on Factory Management, and Professor Norris M. Perris, of the Wharton School, University of Pennsylvania, on Manufacturing control, in the morning; and in the afternoon by continuance of the forum discussions. Dr. J. Weigand presided as the dinner speaker, with 84 box makers and supply men present to enjoy a seasonable banquet. On Mount Penn, the box makers and paper men and other supply dealers met in a baseball contest, the winners being the boxmakers. The dinner was followed by a vaudeville entertainment. One of the most important discussions on the final day of the meeting was that of Henry tSortz, of the Henry Schmidt Paper Box Company, Philadelphia, cost export for the National Association, whose resume of the work of the cost finding committee, of which he is chairman, was an educational and interesting contribution.

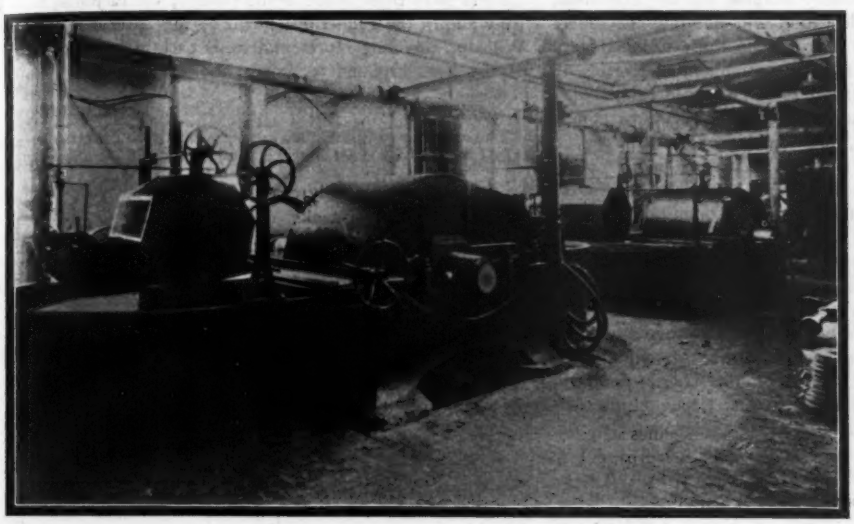
Paper Men to Give Educational Talks

A series of educational talks will be given throughout the winter months for the benefit of the members of the Typothetæ and paper men at the Elks Club, under the direction of the Philadelphia Paper Trade Association, and the direct supervision of George W. Ward, head of the D. L. Ward Company who has been assigned to arrange the program and to provide the various speakers. The program for this instructive and informative series of discussions on the merchandising of printing will include a schedule of speakers selected from the most prominent of trade associates in the advertising field, paper manufacturing and allied industries, who have devoted their time towards acquiring a practical expert knowledge of the subject and are authorities on the marketing of printing. The series will open on October 5 when Howard Donovan, of the Donovan & Armstrong Company, will talk on "Merchandising Through Printed Salesmanship." Others will be scheduled as follows: October 19, C. W. Cabot, Advertising Manager, Hammermill Paper Company, "Printing Gets Things Done"; November 2, Colonel A. B. Franklin, Vice President Strathmore Paper Company, "Psychology of Printed Salesmanship"; November 16, Jesse W. Clark, Director, S. D. Warren Paper Company, "Rising Above Competition"; November 30, N. Schoenbacher, statistician, National Paper Trade Association, "Lower Paper Costs," and December 14, "If I Were Printer," by a speaker to be announced later.

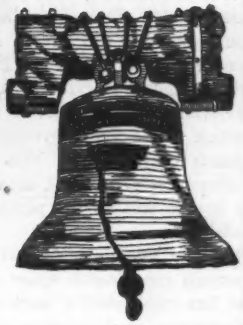
At the meeting of the Philadelphia Paper Trade Association, held last week in the Bourse Restaurant, an enthusiastic vote of approval of this program was passed, the members of the committee were congratulated on the thoroughness of their work in preparing the outline for the series of talks, and a vote of thanks was extended to Mr. Ward. The local printing trade is looking forward with equal enthusiasm to the coming educational campaign. Last year, the Typothetæ arranged a similar program for the paper men, with more than 90 members of the trade attending each week. The talks were held at Typothetæ headquarters. This year, a social touch will be given to the meetings by a dinner to precede the talks.

Paper Trade to Exhibit at Sesqui-Centennial

The paper industry is to be prominently identified with the coming Sesqui-Centennial Exposition to be held in 1926 in commemoration of the 150th Anniversary of the Signing of the Declaration of Independence in this city, it was disclosed at the quarterly meeting of the combined Fine and Coarse Paper Divisions of the Philadelphia Paper Trade Association, held last week. With Simon Walter, vice president of the association, presiding, the Committee appointed by the association to supervise and arrange for the paper exhibit reported that work in this direction had been started, and it was planned to have one of the largest and most comprehensive exhibits of the paper trade ever assembled at an International Exposition and to include the various steps of paper material, from the preparation of the raw materials to the con-



Union Mills
Paper Mfg. Co.
New Hope.



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Rope paper is one of the most difficult papers to make. Here it is brought to a high state of perfection in Dilts beating engines.

On this stock the beating is most important, for here especially, "the paper is made in the beaters."

Dilts beaters are on all grades of paper, including many on rope. Dilts beaters are always good beaters; they make good paper and they have many good friends.

The Dilts approved NEW TYPE Beating Engines, first built in the year 1924, are a great improvement over beaters of the standard Hollander type.

These NEW TYPE are fast-circulating beaters, and the **power consumption is no greater** than on ordinary beaters. They beat and mix rapidly, dump quickly, and handle heavy "furnish" of stock.

Write for information and prices and list of users. You will be interested in the Dilts approved NEW TYPE Beating Engines.

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sumption of the finished product. Philadelphia, as the cradle of American paper making, is admirably adapted for the exhibition, and such a display in Sesqui-celebration will not only be timely but of interest historically, for it was back in those Colonial days that printing and paper making were the prominent industries of this city, with two noteworthy characters so closely identified with civic life of the city and with the nation's government, Benjamin Franklin and David Rittenhouse, the founder of the first paper mill, as the leaders of country in their respective fields. It is planned to take the matter up at the coming National Convention, to be held in Chicago next month, when the Committee will lay before the nation's manufacturers the problem of supplying a comprehensive display, with all the mills, distributors and allied industries represented in the exhibit, so as to give to the industry its proper representation, on a parity with its importance in the commercial world. These are the members of the committee upon whose shoulders will evolve the perfection of the exhibition: Simon Walter, of S. Walter, Inc., David Lindsay, Jr., of Lindsay Brothers, and Norbert A. Considine, of the Paper House of Pennsylvania. Mr. Walter has arranged for a personal visit of inspection to the Sesqui grounds by the officers of the local paper merchants' organization. This inspection will take place on Friday afternoon, October 2, at which time executives of the local paper houses will be the personal guests of Mayor Kendrick of Philadelphia.

While the paper exhibit will be of so great magnitude that it will occupy considerable space at the Exposition, the Paper Committee has established a working contact with the Committee of the Typothetæ, working along similar lines for the printing exhibit, the two industries being so closely allied in the historical interests of the city and in their business associations.

Anderson Paper Co. Reorganized

Having taken over the entire control of the business, Albert H. Anderson is now the sole proprietor of the Anderson Paper Company, recently removed to larger quarters and warehousing facilities at 123 North 4th Street. Through the acquisition of the interests of Harry Edelson, his former partner, he obtained full control of the firm, devoted to the distribution of paper covers and card boards, handling these lines exclusively, and representing all the leading national mills. The firm also is a local distributor for the A. M. Collins line, having recently been appointed a Philadelphia representative. The business was founded by Mr. Anderson three years ago, following more than a decade of association with A. S. Datz and Son. It was about a year and a half ago that Harry Edelson became associated with the firm. With the passing of his interests to the control of Mr. Anderson, he is no longer connected with the company.

Printers Visit Warren Mills

An educational pilgrimage to the mills of the S. D. Warren Company was made during the week by a group of printers, patrons of the Charles Beck Paper Company, 609 Chestnut street. The party left here Monday for the plant of the Warren Company, in Portland, Me., under the guidance of Andrew Simon, vice president and sales manager of the Beck Company, who conducted the master printers through the mills, and with the assistance of the educational staff of the paper house gave their allied associates a practical lesson in the details of paper making. President Leon Beck, of the company, is back at his desk after attending the Warren Convention at Poland Springs, Me. George Rudolph attended the convention of the National Association of Paper Box Manufacturers held at Reading, Pa., when the Central and Eastern Divisions met in their annual session, representing the Box Paper Department of the Beck Company. Charles J. Beck, head of the Beck Machine Company, who has been vacationing in the Middle West, is again at his dsek. The Beck Machine Company, allied with the Beck Paper Company, has been enjoying an active season for its sheet cutters and slitters and has enough orders on hand to keep operation at present speed until December. Among the recent installations of the Beck Sheet Cutters were those made in the plant of the Eastman Kodak Company and in the Film Department of the DuPont Company. J. F. Wilhelm, traveling representative, is back at his desk, after a tour of the New England territory.

Atlantic Paper Tube Corp. Reorganized

The former Philadelphia paper tube manufacturing company, the Atlantic Paper Tube Company, which removed to Riverton, N. J., a few years ago, has been reorganized and has resumed operations at the New Jersey headquarters. Under the recent reorganization and incorporation, the officers of the company are: President, Raymond H. Gerhardt, and Secretary and Treasurer, Raymond E. Richardson. The plant formerly was located at 20th and Erie avenue, in this city, when J. F. Auer was head of the company, but removed to Riverton about three years ago. The capital of the reorganized company totals $75,000, and the firm will continue to manufacture a complete line of paper tubes, containers and kindred products.

Norwood Paper and Paper Stock Co. Opens

Following the incorporation of the Norwood Paper and Paper Stock Company under the Delaware laws, the company has established its business in the warehouse and office building at 216 South Front street, where it will deal in waste paper stock. The officers of the company are: President, C. G. Ashbridge; Vice President, W. E. Thomas; Secretary and Treasurer, A. N. Souder. The capital stock is $25,000.

Paper Making Union Politics Sizzling

[FROM OUR REGULAR CORRESPONDENT]

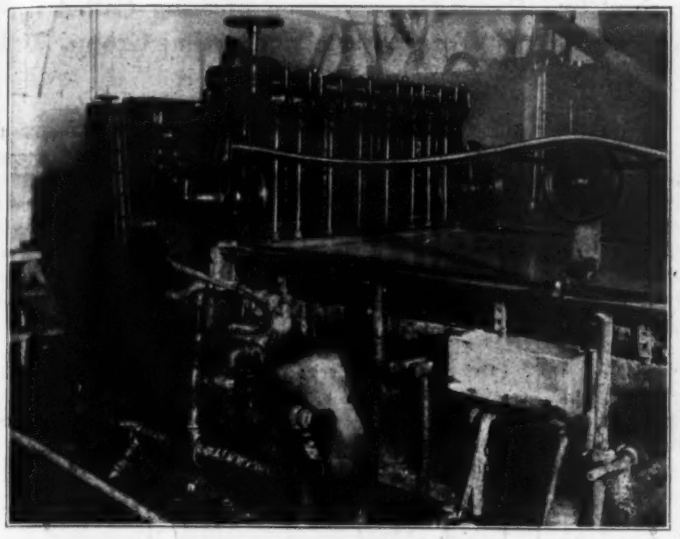
ALBANY, N. Y., September 28, 1925.—Papermaking union politics, which have been sizzling for several weeks past, were considerably complicated this week when Edward J. Harpe, of Rumford, Me., officially notified Matthew J. Burns, secretary of the International Brotherhood of Papermakers, that he had reconsidered his decision not to accept the insurgent nomination for president of the Brotherhood.

Mr. Harpe, who was nominated several weeks ago to head the ticket sponsored by Jeremiah T. Carey and his supporters, notified Brotherhood officials a few weeks ago of his declination of the nomination for president, stating at that time that he had no desire to become president of the Brotherhood. In his letter this week the Rumford man states that he is "serving official notice" on Mr. Burns as secretary of the organization that he is now a candidate, in good standing, for the presidency. With the several thousand ballots, however, already printed and in the hands of the various locals in the United States and Canada, Secretary Burns is paying no attention to Mr. Harpe's latest decision relative to the presidency.

Back in August Secretary Burns wrote the local union in Maine to which Mr. Harpe belongs, asking if there were any mitigating circumstances which might be taken into consideration in permitting Mr. Harpe to become a qualified candidate, despite the fact that he owed several months dues. The local union replied that in its opinion there were certain circumstances surrounding Mr. Harpe's case which should receive consideration. Along about this time, however, Mr. Harpe, in a letter on file at headquarters, stated that he did not care to enter the contest. Accordingly the ballots will remain as they have been printed and Mr. Harpe will not be recognized as a candidate for president. What further action, if any, will be taken by the insurgent faction of the Brotherhood is not known at this time.

Stewart L. Irvine Returns From Europe

KALAMAZOO, Mich., September 28, 1925.—Stewart L. Irvine, secretary-treasurer of the Saniwax Paper Company, has returned from a ten weeks' tour to various countries in Europe.



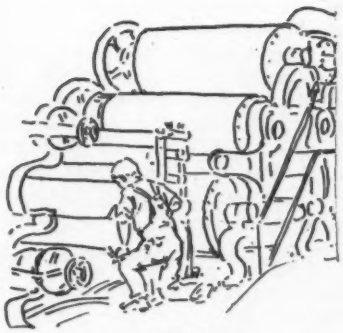
Voith Inlet Sales for the past nine months show an increase of 100% over the total sales of 1924. Repeat orders are received every month. A machine that is so widely purchased in a dull period must be a good machine for paper makers have been buying only equipment that improves their paper and lowers costs. This has been our experience with the Voith Inlet.

Deckle Width Changes Easily Made with *the* Inlet

Many mills are forced to maks many changes in the width of the sheet across the wire. This continuous change in deckle width between runs is a daily occurrence in many mills and involves much time, trouble and expense, especially when many short orders are being produced.

When the above conditions exist, the Voith Inlet is equipped with a Deckling-In Device for adjustment between deckles. The degree of adjustment is made suitable for the requirements of each particular installation. This device allows for making deckle width changes while the machine is running, thus eliminating the former inconveniences and increasing the output of the machine.

A booklet giving complete information regarding the Voith Inlet will be sent on request. Write for your copy today.



VALLEY IRON WORKS CO.

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New York Office: 350 Madison Ave.

Fort William Paper Co. To Buy Power Company

Kaministiquia Power Co. To Be Acquired by Paper Concern at a Meeting Called for September 30—Quebec Pulp Co., Which Recently Acquired the Chicoutimi Group, Will Erect a Paper Mill at Chicoutimi or Some Near By Point

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., September 30,1925.—A satisfactory agreement has been arrived at for the purchase by the Fort William Paper Company of the Kaministiquia Power Company, and a general meeting of the shareholders of the latter company has been called for September 30 to ratify the deal. Under the terms of the deal, shareholders of Kaministiquia Power Company will receive the equivalent of $145 per share for their stock, payable $95 per share in cash and the balance in 7 per cent cumulative preferred shares of a new power company which will be incorporated by the new interests, possibly under the same name as at present. For the additional protection of preferred shareholders, it has been arranged that three of the present Kaministiquia directors will be on the board of the new company. In receiving the equivalent of $145 per share, Kaministiquia Power stockholders will get a premium of $22 per share over the prevailing market price of $123 per share, at the time of the announcement.

Sir Herbert Holt, the president of "Kam Power" in a statement to the shareholders says: "Since the entry into our fields of the Hydro Electric Power Commission of Ontario your directors have had serious difficulties to contend with political and otherwise; also as a result of contracts made with the Hydro Electric Power Commission, first by the city of Port Arthur and later by the City of Fort William, it became necessary for your directors to find a new market for a considerable portion of the output so released, for which purpose your company, as advised in previous reports, assisted the Fort William Paper Company in the establishment of a pulp and paper mill at Fort William. Your directors are of the opinion that the risk of further unfriendly action would be greatly diminished, if not altogether removed, if the control of your company was in the hands of a large industry in the Province of Ontario such as the Fort William Paper Company. Under the terms of the offer, the Fort William Paper Company will incorporate a new power company (preferably under the same name) to which this company will be transferred.

Quebec Pulp Co. to Erect Paper Mill

Operating under favorable conditions, the Quebec Pulp Company, which has taken over the former Chicoutimi pulp group and its subsidiaries, is planning to erect a paper mill at Chicoutimi or at a point nearby, it is learned. Several directors have been appointed on the board recently, who, it is expected, are to help in placing the company in a good position. In connection with the projected activity, it is learned that Mr. McNichols, of L. G. Beaubien & Co., is to take up his residence in Chicoutimi and be in charge of the affairs of the company. Already a contract for the inventory of the limits of the company has been awarded to Thomas Maher, of Montreal, who has commissioned airplanes with that object in view.

Price Bros.' Shares to Be Listed in London

Official permission has been granted to deal in Price Brothers 6½ per cent preferred and common shares on the London Stock Exchange. It is understood that the preferred shares will be listed on the Montreal Exchange shortly. It will be recalled that the Royal Securities Corporation made public issue of seven million dollars par value in January last, at which time a portion of the issue was distributed through Kitcat & Aitken and Andrew Holt & Company, in London, England. It is understood that distribution has been most successful, and that the shares enjoy a broad market. Price Brothers earnings are understood to be considerably in excess of last year, and its liquid position is excellent. Construction of the company's New River Bend mill is completed as far as buildings, etc., are concerned, and the installation of machinery is now progressing. It is expected that one machine will turn out newsprint paper in October, and the other machine in December, the mill going into full commercial operation early in January, 1926.

Powell River Co. to Increase Production

Production of paper by the Powell River Company will be increased 80 per cent, by the completion of a $5,000,000 development programme, now under way, according to an announcement made by M. J. Scanlan, a director of the company. At present the plant is turning out about 75,000 tons a year.

Lower Freight Rates Wanted

In view of the forthcoming general investigation of railroad rates by the Railway Commission, the Canadian Pulp and Paper Association has been asked by that Commission for a statement of the situation as bearing on the pulp and paper industry. A brief prepared by the Association has now been sent to the Board. It deals with the importance of the pulp and paper industry, which as an exporting industry ranks second only to agriculture and livestock, and proceeds in part as follows:

It is submitted that fair and equitable freight rates are vital to the welfare of the industry as well as to its further development and expansion, for the following reasons:

"1.—That any undue burden resulting from the imposition or maintenance of excessive freight rates puts our industry at a distinct disadvantage with its European and American competitors. Our chief market is the United States. Water-borne traffic from Europe and Newfoundland reaches the large markets adjacent to the Atlantic seaboard at much lower carrying charges than all-rail deliveries from Canada, which, generally speaking, also exceed comparative rail rates under which our American Competitors get their products into their home markets, making lower freight rates essential if we are to retain or extend our present business. European competition in the world's markets is steadily increasing as economic conditions become more normal.

"2.—That since pulp and paper, no less than grain, depend upon the world's markets, home consumption being comparatively negligible in extent, Canadian exporters of these commodities require and should receive every encouragement in meeting world-wide competition which can only be given through a substantial reduction in rates from our mills to seaboard on overseas business. European mills are generally so situated as to enjoy direct access to water transportation.

"3.—That the burden of railway freight rates applies not only to our finished products but also enters very largely into the cost of our raw materials, it being estimated that every carload of finished products from the mill represents four carloads of raw materials shipped into the mill. Some of the principal materials are pulp-wood, coal and sulphur. A further increase in rates, therefore, or any inequitable distribution of the cost of railway maintenance, whether intended to satisfy regional exactions or otherwise, will add proportionately to our difficulties. We submit that freight rates on pulpwood and woodpulp are now excessive, being considerably greater than those paid by our chief competitors and should be readjusted downward."

This is an unretouched photograph of a Ferguson Standard No. 3 building just completed for the Continental Gin Company, Birmingham, Ala.

It is almost exactly like others of the same type in use by National Cash Register, Procter & Gamble, Showers Bros., General Electric, Robbins & Meyers, and other manufacturers who have bought this Ferguson building.

Why waste your time and money in employing architects and making plans when Ferguson will ship this building from stock and *guarantee* useful occupancy in 30 working days at a definite price. Phone, wire or write.

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Northwestern Superintendents at Madison

Visit Forest Products Laboratory and Discuss Technical Paper—Also Visit Beloit Iron Works Where They View in Process of Construction One of the Largest Paper Making Machines of the Kind in the World—Paper Men Guests of Bergstrom Paper Co.

APPLETON, Wis., September 26, 1925.—The Northwestern Division of the American Pulp and Paper Mill Superintendents' Association met at Madison and Beloit last week.

At Madison the superintendents visited the Forest Products Laboratory and discussed several technical papers. At Beloit they visited the Beloit Iron Works, the Beloit Box Board Company plant and the Dowd Knife Works, manufacturers of cutting knives used largely in the papermaking industry.

The visitors were the guests of the three Beloit industries at a dinner served in the Hotel Hilton at noon and then were taken to the factories. Later in the afternoon they were also taken on a tour of inspection of the city, with a round of golf at the Country Club to "top off" their visit.

While visiting the Beloit Iron Works, they observed one of the largest papermaking machines in the world in construction. It is being built for the Crocker-Burbank Company, of Fitchburg, Mass., and will make high grade paper to be used in the *Saturday Evening Post* and the *Ladies Home Journal*, Curtis publications noted for the excellence of their paper stock and typography. The machine is said to be the most efficient ever manufactured for quality of product, rate of production and speed in operation. The visiting superintendents were given an opportunity for thorough inspection of the machine, and they were greatly interested in it.

Grants Power Company's Petition

Petitions of the Wisconsin Gas and Electric Company for condemnation of lands in Brown and Oconto Counties for joint extension of a power line with the Northern Paper Mills of Green Bay, were granted today by Judge Merrill, of Green Bay, and Judge Jones, of Oconto.

This brings to a close a legal battle begun several months ago. A public utility company at Green Bay opposed the project, as far as the W. G. & E. was concerned in it, because they declared it to be an invasion of their territory, since the contract between the paper mill and the power company provided for an interchange of service in emergencies.

Mrs. A. N. Strange Badly Injured

Mrs. A. N. Strange, of Menasha, wife of the well known paper manufacturer and prominent in Neenah and Menasha social circles, suffered a broken hip this week when she fell down a flight of stairs at the home of her niece, Mrs. J. R. Barnett, Jr., Neenah. Mrs. Strange was conveyed to a hospital at Madison where an X-ray examination of her injuries was made. Besides the injury to the hip, she suffered numerous cuts and bruises.

Good Safety Record Interrupted

When two men employed at the Niagara, Wis., paper mill of the Kimberly-Clark Company suffered facial and body burns from a sulphur explosion last week, the accident put a stop to a good safety record established by the company.

In 1923 the mill claimed the world's record for paper mills with a run of 150 consecutive days, or a total of 97,800 man days, without a lost-time accident. This year they broke their own record, going 172 days without an accident and running up 111,584 man days. The Kimberly mill this year ran 147 days, but established a higher man-days' record in view of the fact that this mill employs more men.

Paper Men Guests of Bergstrom Paper Co.

A party of nine men interested in papermaking were in Neenah this week as guests of the Bergstrom Paper Company. A luncheon was served at noon Tuesday at the Valley Inn after which a visit was made to the Bergstrom mill.

The party consisted of: F. Pagenstecher, C. A. Fox and G. H. Geipheide, of Kalamazoo, Mich.; H. O. Parker, Niles, Mich.; W. W. Sumderland, of West Carrolton, Ohio; S. L. Wilson, Holyoke, Mass.; William Kettra, Chillicothe, Ohio; G. W. Gilkey, of Planwell, Mich., and W. D. Randale, of Cincinnati, Ohio.

National Paper Trade Officials Visit St. Louis

[FROM OUR REGULAR CORRESPONDENT]

ST. LOUIS, Mo., September 28, 1925.—About 100 St. Louis paper jobbers and their salesmen gave a dinner at Hotel Statler, St. Louis, September 25, at which three officials of the National Paper Trades Association were guests. Addresses were delivered by the guests, who were: J. C. Mallelieu, vice president of the National Association; Charters K. Higgins, assistant secretary, and N. A. Schoenbucher, accountant. While conditions in the paper industry in general was discussed, wrapping paper was the principal topic. Speakers also gave consideration to the program of the national convention of the Association to be held in Chicago, October 5, 6 and 7.

Tendency of the mills to increase the prices on wrapping stock was discussed. This advance has not yet been reflected in the jobbing trade in St. Louis and while business in the Mississippi Valley during the past year has not come up to the anticipations of the jobbers, speakers, both local and national, expressed the opinion that trade in this district was due for a decided improvement during the next twelve months.

Col. Martin Collins, president of the Graham Paper Company, spoke at length on conditions in St. Louis, as did T. P. Chapman, president of the Chapman Paper Company. Nathan Rosenthal, of the Rosenthal Paper Company, presided at the meeting, and Herman Orchard, president of the Orchard Paper Company, had charge of entertainment.

The guests are on a tour which will end at the national convention. They had just arrived from Louisville on their way to Kansas City. William C. Ridgway, national secretary, was to have addressed the diners, but was unable to be present.

Preparing Casein For Coating Material

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., September 23, 1925.—In the preparation of casein as an adhesive in coating paper, the importance of the size of the particles must not be overlooked, the Bureau of Standards, Department of Commerce, warns.

A casein manufacturer recently submitted a sample of such material to the Bureau's laboratory for test. The sample had been rejected by a coated paper manufacturer who stated that it was unsuitable for his use on account of its insolubility. The material was in the form of coarse lumps, some as large as 1-4 x 1-2 inch. While the casein could not be dissolved in this form with the usual coating mill solvents, upon grinding to suitable size it readily dissolved, and was found to be a very high grade material in all respects.

For coated paper used casein should be ground to pass through a 40 mesh screen. Grinding mills of French buhr-stone, and a screening system such as that used in commercial coffee plants, are suitable for reducing casein to the desired fineness.

A New Trademark

An Old Concern

Paperboard Industries Association Formed

At a meeting of manufacturers of Boxboard, Corrugated and Solid Fibre Boxes and Folding Boxes, held at the Congress Hotel, Chicago, on Thursday, September 11th, Paperboard Industries Association was orgainzed to take over the activities of the three heretofore existing associations; namely, Box Board Association, National Container Association and Folding Box Manufacturers National Association.

Officers of New Association

The following are the officers and members of the Executive Committee of the new association: President, Fletcher M. Durbin, Sefton Manufacturing Corporation, Chicago, Ill.; Vice President, Walter P. Paepcke, Chicago Mill and Lumber Company, Chicago; Vice President, J. P. Brunt, Mid-West Box Company, Chicago; Vice President, Arthur C. Osborn, The United States Printing and Lithograph Company, Norwood, Ohio.

The officers named above, with the following, constitute the Executive Committee: W. J. Alford, Jr., Continental Paper Company, Bogota, N. J.; E. T. Gardner, The Gardner & Harvey Company, Middletown, O.; Irving Hill, Lawrence Paper Manufacturing Company, Lawrence, Kans.; Samuel Samuels, American Corrugated Paper Products Company, New York, N. Y.; H. C. Stevenson, The Rochester Folding Box Company, Rochester, N. Y.

The Executive Committee consists of three members from each of the three groups comprised in the new Association; namely, Paperboard Group, Container Group and Folding Box Group.

Staff Appointments

The Executive Committee has just announced the appointment of the following as the staff of the new Association: G. R. Browder, General Manager and Treasurer; H. A. Dickie, Assistant General Manager; H. S. Adler, Secretary; Grafton Whiting, Statistician; E. O. Merchant, Economist; Morris Townley, Legal Adviser.

The general offices of the Association will be maintained at 608 South Dearborn street, Chicago, with a branch office located at 19 West 44th street, New York City, the latter office in charge of Mr. H. A. Dickie, Assistant General Manager.

Objects of the Association

The objects of the Paperboard Industries Association, which are clearly set forth in Section 2 of the Constitution, are as follows:

(a) To promote the general welfare of the various branches of the paperboard industry, and to encourage and bring about close and more friendly relations between the members.

(b) To promote fair trade practices.

(c) To promote and develop the market, both domestic and foreign, for paperboard and its products.

(d) To promote and encourage industrial research with a view to the improvement and development of manufacturing processes.

(e) To encourage the principle of arbitration.

(f) To cooperate with transportation committees and government boards in establishing equitable traffic regulations, and to safeguard members and shippers against actions or rulings detrimental to the industry.

(g) To develop and encourage accurate methods of accounting and cost determination.

(h) To collect, compile and disseminate statistical data relative to the paperboard industry so as to enable members to give intelligent direction to their respective activities.

Conferences Leading to New Association

About a year ago the idea was advanced that there should be closer contact between the several branches of the paperboard manufacturing industry and the closely related box manufacturing industries. The desirability of this closer relationship became more and more apparent and at meetings of the heretofore existing associations, particularly during the past two months, reasons were advanced regarding the desirability of bringing about a merger or consolidation of Associations. The main questions were. Is it desirable to have one large association? Can the activities of the several groups be so coordinated as to work smoothly? Will a large association make for better conditions in the paperboard, corrugated and solid fibre box and folding box industries?

It soon became apparent that the best way to find a correct answer to these questions was to appoint representative committetes; the committees to meet together and to report back to their respective memberships.

No time was lost. Pursuant to action of the governing boards of the three associations, a committee was appointed to represent each group in the deliberations. The following is the personnel of the three committees:

Box Board Association Committee:

J. P. Brunt, Chairman, Mid-West Box Company, Chicago, Ill.; W. J. Alford, Jr., Continental Paper Company, Bogota, N. J.; E. T. Gardner, The Gardner & Harvey Company, Middletown, O.; Geo. W. Gair, Robert Gair Company, New York, N. Y.; H. L. Rauch, Consolidated Paper Company, Monroe, Mich.

National Container Association Committee

Fletcher M. Durbin, Chairman, Sefton Manufacturing Corporation, Chicago, Ill.; James B. Fenton, Buffalo Box Factory, Buffalo, N. Y.; F. J. Kress, F. J. Kress Box Company, Pittsburgh, Pa.; Dulaney Logan, The Mengel Company, Louisville, Ky.; Samuel Samuels, American Corrugated Paper Products Corporation, New York, N. Y.

Folding Box Manufacturers National Association Committee

Arthur C. Osborn, Chairman, The U. S. Printing and Lithographing Company, Norwood, Ohio; Henry T. Brown, Brown & Bailey Company, Philadelphia, Pa.; H. C. Stevenson, The Rochester Folding Box Company, Rochester, N. Y.; H. H. Stonebarger, The Globe Folding Box Company, Cincinnati, Ohio; J. D. Zellerbach, National Paper Products Company, San Francisco, Calif.

Plan to Increase Membership

It was the sense of the meeting that immediate steps should be taken to build up the membership of the new association, and with this in view it was suggested that a report of the meeting, together with copies of the Constitution be furnished to non-member manufacturers. President Durbin stated that this feature would be given attention by the Executive Committee, but that he would ask the Vice-Presidents and other members of the Executive Committee to consider themselves as a Membership Committee. He also directed that copies of the Minutes of this meeting, together with copy of the Constitution, be furnished to all present members of the three heretofore existing associations as quickly as possible.

It was decided that the list of members of the new Association should not be published until all present members of the three associations have had an opportunity to sign the Constitution.

Manning Abrasive Co. Damaged by Fire

[FROM OUR REGULAR CORRESPONDENT]

GREEN ISLAND, N. Y., September 21, 1925.—Fire starting in the third floor of the plant of the Manning Abrasive Company caused a loss estimated at $2,000. The two hundred employees of the plant were forced to flee from the building because of the dense smoke resulting from the fire. The blaze which is said to have been caused by sparks from a motor was confined to stocks of paper on the third floor.

When Hour Production wanes it's time for the SCRAP-HEAP!

WHEN you fail to weigh the cost of new, modern machinery against the excessive upkeep of the old, you are doing an injustice to yourself. The law of diminishing returns works relentlessly, and in the science of paper-making a transformation is taking place at present that has reached mammoth proportions.

When one mill can produce paper cheaper than another, it is obvious that something is wrong. Over thirty millions of dollars were saved last year by the railroads through the retirement of old locomotives and the substitution of modern efficient types. The financial statements of many roads were, partially for this reason, in a much healthier state than at any time since the war. The same holds true with paper mills—those mills that utilized modern equipment had every advantage over those that had obsolete machinery.

When your production wanes, when your costs keep on mounting, isn't there a possibility that it's time for the scrap-heap? Many users of the NEW BELOIT FOURDRINIER can testify to the benefits that this modern equipment has brought to them. In one case it meant a 15% increase in production. In another, it meant nearly 200 tons increase in production with a saving of over 600 man hours in time and labor.

A new era in paper-making is upon us and the NEW BELOIT is contributing to this in no uncertain terms. It will pay you to investigate.

Send for Bulletin No. 9 for further facts.

Beloit Iron Works **Beloit, Wis., U. S. A.**

Since 1858 Builders of Paper, Board Mill and Container Plant Machinery

Trade-Marks Department

CONDUCTED BY NATIONAL TRADE-MARK CO., WASHINGTON, D. C.

The following are trade-mark applications pertinent to the paper field pending in the United States Patent Office, which have been passed for publication and are in line for early registration unless opposition is filed promptly. For further information address National Trade Mark Company, Barrister Bldg., Washington, D. C., trade-mark specialists. As an additional service feature to its readers, PAPER TRADE JOURNAL gladly offers to them an advance search free of charge on any mark they may contemplate adopting or registering.

SATINETTE No. 207,759. Port Huron Sulphite and Paper Company, Port Huron, Mich. For white and colored sulphite papers to be used for wrapping, wax, crepe, bag, document, envelope, tag, coating and printing paper, paper for drinking cups and fruit wraps, twisting paper used in the manufacture of paper twines, etc.

LEATHERETTE No. 207,825. Port Huron Sulphite and Paper Company, Port Huron, Mich. For white and colored sulphite papers to be used for same as above.

A WELCOME TREAT FOR A SUNDAY EAT. No. 211,689. L. A. Liebs Company, Inc., New York City. For wrappers.

SAPO No. 212,194. National Coated Paper Corporation, Pawtucket, R. I. For coated paper in various shades on various colored bakings with a high waterproof finish made by a special process with a high lustrous finish.

SILVERTONE No. 216,260. Crown Williamette Paper Company, San Francisco, Calif. For paper bags.

B B No. 216,822. Brown & Bailey Company, Philadelphia, Pa. For folding paper boxes, cartons, cases, and containers.

French Paper Imports Increase

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., September 23, 1925.—French imports of paper and paper products during the first half of the current year amounted to 16,380,600 pounds, valued at $7,411,426, and exports to 7,130,800 pounds, valued at $8,166,715, both quantities representing a very slight increase over the first half of 1924, according to a report received by the Paper Division of the Department of Commerce from American Consul Davis at Paris. The report continues:

"The bulk of the paper imported into France comes from Norway and Sweden, these two countries having between them supplied 56 per cent of the ordinary paper weighing more than 30 grams per square meter, 83 per cent of this class of paper weighing 30 grams and less per square meter, and 75 per cent of the vegetable and imitation vegetable parchment papers, imported during the first half of the current year.

"Next in importance to the two Scandinavian countries as sources for supply of imported papers were Finland, Switzerland, and the Netherlands, each of which supplied from 11,000,000 to 13,000,000 pounds of paper, consisting chiefly of machine-made papers of more than 30 grams per square meter.

"Imports from the United States, while representing a relatively small proportion of the total receipts, showed satisfactory gains so far this year, the total for the first six months amounting to 2,796,535 pounds, in comparison with 2,186,081 pounds during a similar period in 1924, and 1,352,522 in 1923. Ninety per cent of these imports consisted of cardboard, of which the United States has been the leading source of supply, its principal competitor in this field being Germany. Approximately half of the imports of the cheaper grades of cardboard were supplied by the latter, while over 70 per cent of the imports of fancy cardboard and cardboard articles came from the United States."

Condemnation Proceedings in Dam Case Postponed

GLENS FALLS, N. Y., September 21, 1925.—Condemnation proceedings instituted by the Hudson River Regulating Board against the Fenda, Johnstown & Gloversville Railroad Company to obtain property in connection with the construction of the Sacandaga Reservoir dam at Conklingville were postponed until November 2 when the case was called at a special term of the Supreme Court before Justice Angell in this city. There was no argument. At the same time the Railroad Company's application for an order restraining the Regulating Board from taking the land will be considered.

This litigation is considered of great interest to the pulp and paper industry up-State as several paper and pulp concerns, including the International Paper Company, Finch, Pruyn & Company, Union Bag and Paper Corporation, West Virginia Pulp and Paper Company, and others, have been made parties to the action brought by the F. J. & G. Co. Former Governor Nathan L. Miller has been engaged by the Hudson River Regulating Board to look after its interests in the action while it is reported that Former Secretary of War Lindley M. Garrison will handle the case for the railroad. Despite the filing of the action by the F. J. & G. Co., which was accountable for the fact that no bids were received when the first issue of bonds were offered for sale, work has been going forward on the project, which, in addition to regulating the flow of the Upper Hudson River, will greatly increase the power possibilities of the river. The work now under way is being carried on with funds which the board has available. When the present litigation is disposed of the $2,000,000 bond issue will again be advertised for sale.

Mead Pulp & Paper Co. Builds Addition

CHILLICOTHE, Ohio, September 21, 1925.—Work on the new addition at the Mead Pulp and Paper Company is progressing rapidly and, it was unofficially learned today, says the *Chillicothe Gazette*, is about one third complete. If the present rate of progress is maintained, it was said, the buildings will be well under roof and on the way toward completion before snow flies.

Contractor Ernest Litter, who is doing the brick work under the supervision of the Management Engineering & Development Co., of Dayton, general contractors on the job, estimated this morning that over 300,000 of the million and odd bricks which go into the walls of the new plant were already laid.

He paid special compliment to the ironworkers on the job, who are keeping pace with the brick masons and whose quick work has eliminated many minor delays, due to the co-ordination of the two branches of work.

It is of noteworthy mention that work in the present Mead finishing room is progressing without interruption, despite the fact that workmen are erecting new walls about the entire space. It is not believed that the work of this department will be hindered at all during the length of the construction work.

Contractor Litter today declared that the present Mead project is the largest single construction job attempted here since 1920.

Thomas Mangan Honored by Workers

FORT EDWARD, N. Y., September 21, 1925.—Thomas Mangan, resident engineer, for the past several years, at the Fort Edward Mill of the International Paper Company, who was recently appointed manager of the I. P. Mill at Wilder, Vt., was the guest of honor at a special meeting of the Thomas F. Adriance Mutual Benefit chapter of the Fort Edward Mill. Mr. Mangan left Fort Edward Monday of this week for Vermont to assume the duties of his new position at the Wilder plant,

About seventy-five were present at the meeting which was held in Adriance Hall. Dominic Hinckley presided in the absence of the president, Samuel Newton. A musical program was furnished by Shepard's orchestra and General Manager Wilson, of the local mill, and Assistant Manager Buckley made brief addresses. E. J. William spoke on behalf of employees of the finishing room.

Mr. Mangan was presented with a large chest of silver by the employees of the Fort Edward Mill. General Manager Wilson, making the presentation speech, spoke of the esteem in which Mr. Mangan is held by the employees of the Fort Edward plant and during his remarks stated that Mr. Mangan's promotion was due to his successful efforts in putting Fort Edward Mill on a paying basis.

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PRINTING PAPER
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EVERY DESCRIPTION

Coating With Glue and Casein

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., September 30, 1925.—An important series of tests was made last week covering three days at the Paper Laboratory of the Bureau of Standards in connection with the coating of paper with both glue and casein. In addition to the making of the coated paper at the mill at the Bureau of Standards a run of this paper was made on the presses of the Government Printing Offices which was said to have shown highly satisfactory results in favor of the glue coated paper.

Officials of the Paper Laboratory of the Bureau have tabulated the three results shown by the test in their judgment. First, that with the proper selection of the glue used and the adaptation to local conditions and product requirements the use of glue in coated paper requires little change in operating technique from the procedure with casein; second, that the preparation of various types of glue offers a considerable latitude within which local conditions may be met; and third, that the use of glue-band coated paper offers no new difficulties to the printer and engraver for ordinary work.

The tests were witnessed by representatives of the National Association of Glue Manufacturers as well as by a number of representatives of paper manufacturers and Government officials. The work in the Paper Laboratory was under the direction of Mr. Scribner, Chief of the Section, while the work at the Government Printing Office was in charge of E. O. Reed, Chief of the Testing Laboratory of the Government Printing Office. Mr. Reed also gave a talk to those attending the tests on the different grades of glue used in printing offices for binding purposes and roller making and spoke of some of the tests which have been made in his laboratory. The various papers were run on commercial work on the same presses and under identical conditions and it seemed to be the concensus of opinion that the glue coated paper made a very satisfactory showing.

St. Maurice Co. Not Adding to News Print Output

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., September 28, 1925.—The St. Maurice Paper Company, of Three Rivers, has issued a denial of the report that the company intended to enlarge its present plant by the addition of two or three new machines for the manufacture of news print. This, it is pointed out, would mean new production of 200 to 250 tons, in addition to the 140 to 150 tons that was added this year by the company. As it stands at present, the company is producing over double the amount of news print it did last year and has its usual production of sulphate pulp, which is shipped to the parent company, the Union Bag and Paper Corporation.

With regard to the announcement that a machine from the Union Bag's plant at Hudson's Falls, N. Y., is being transferred to the St. Maurice Company's plant at Camp Madeleine, it is stated that the machine is for the making of wrapping paper to cover the company's requirements for its news print production. The capacity of this machine is about 5,000 tons of wrapping paper a year. As the St. Maurice Paper Company's requirements are only about 2,500 tons yearly, the balance will probably be disposed of to the St. Lawrence Paper Mills, which now has to buy its wrapping paper for its news print rolls from other sources.

Lambooy Label Co. to Have New Plant

KALAMAZOO, Mich., September 26, 1925.—The Lambooy Label and Wrapper Company has broken ground for a new factory building at 2115 Portage street, at the intersection of Palmer avenue. According to Karl Lambooy, proprietor and general manager, the new structure will provide about 10,000 square feet of factory floor space and when completed will be a model plant in every particular. It will be a one story structure, thus eliminating the need of an elevator. It will be constructed of brick, reinforced and steel. The floor will be of solid cement, topped by a maple flooring to insure ease in walking for employees. All sash will be steel, the windows being large, thus assuring ample natural light and air.

The office structure faces on Portage street and will be a comfortable and well arranged unit. The sanitary conveniences for both office and factory employees will be ample.

Mr. Lambooy is now planning to purchase considerable new equipment for both factory and office, thus materially increasing the capacity of the plant. This plant now has an annual output of approximately 250,000,000 labels, in addition to commercial printing and bread wrappers. One of the latest machines installed is for the manufacture of high grade seals. At one operation this device prints, cuts, embosses and boxes seals at the rate of 500 a minute.

This concern is one of the most active and progressive of Kalamazoo's auxiliary paper industries, using hundreds of tons of paper annually.

G. H. Pountain Heads Michigan Superintendents

KALAMAZOO, Mich., September 28, 1925.—George H. Pountain, for years secretary-treasurer of the Michigan division of the American Pulp and Paper Mill Superintendents' Association, was last week elevated to the office of president of that organization, succeeding E. H. Gilman. Since the formation of the Michigan division, Mr. Pountain has been one of its most active and loyal supporters.

Other officers named are: First vice president, Michael Redmond, Kalamazoo Paper Company; second vice president, Clarence Thorne, Watervleit Paper Company; third vice president, Clarence Harter, Rex Paper Company; secretary-treasurer, Alfred Bryant, Bryant Paper Company.

The above officials constitute the executive committee and according to President Pountain they will meet in a few days and lay out the general program for the season of 1925-26.

Frank B. Eilers was a guest at the dinner session and gave an interesting talk on his recent trip to Japan.

Paper Company Receiver Makes Report

DENVER, Colo., September 17, 1925.—Wilbur F. Denious, receiver for the Myers Pulp and Paper Company, appeared in the District Court at Denver, Colorado, September 16, and filed his report, showing that there was a balance of $28,921.31 cash on hand and asked that he be discharged.

At one time there was $379,513.66 cash on hand, this being the receipts from the sale of the property and other collections. It is also shown that Denious paid to himself as receiver and to counsel for the company the sum of $25,000.

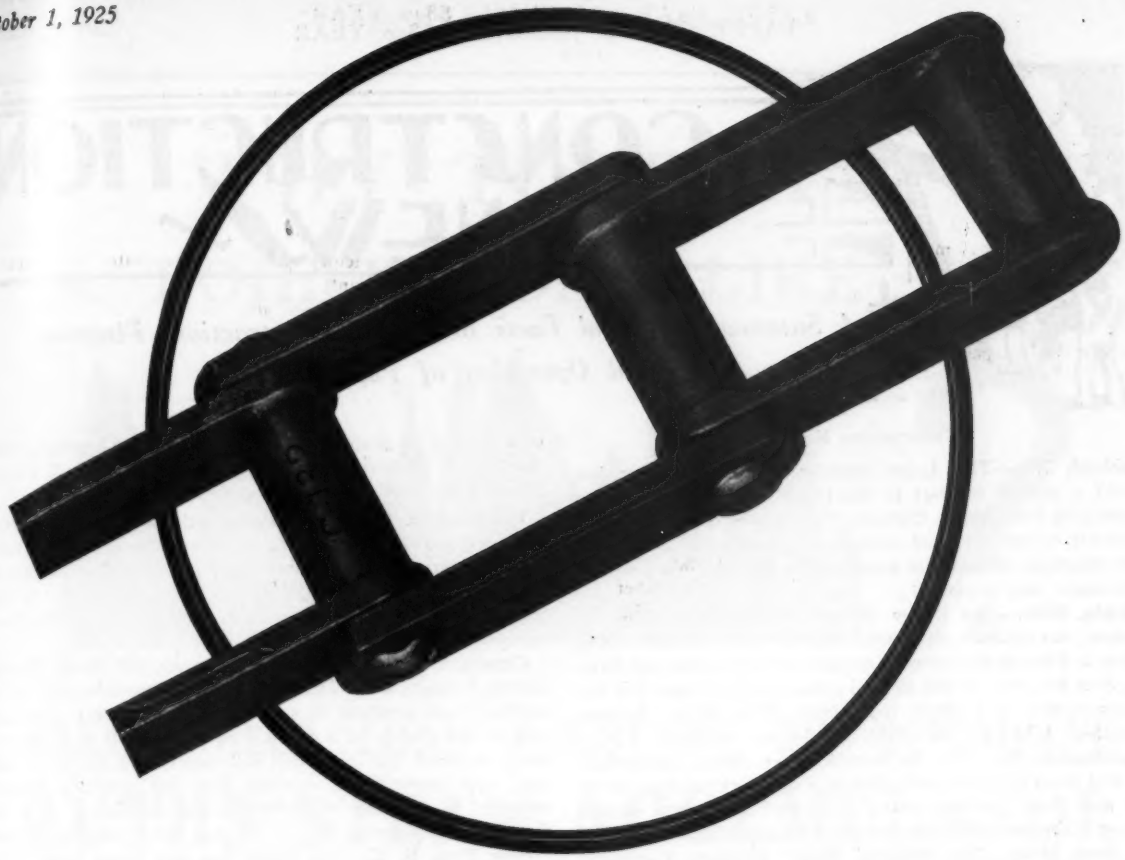
Everything was in order and after the customary review by the court it is expected that the receiver will be dismissed and the property revert to the new owners.

Recent reports from the mill are to the effect that business is getting better and success is assured.

Demand Improving in St. Louis

ST. LOUIS, Mo., September 28, 1925.—As autumn arrives St. Louis paper jobbers find themselves at the beginning of the buying season with business already in better shape than was generally expected and surely much improved over one year ago. Cautious buying with orders none too large continues to be the rule although in the aggregate some improvement was being shown in the size of orders at the close of September.

Despite this slight improvement the cautious buying attitude, which has long prevailed continues to be the stumbling block to increased business. This condition is expected to be eliminated and jobbers feel that business being placed only for immediate needs indicates a steady consuming demand and that a substantial foundation is being laid for better business.



19,500 Feet Link-Belt C-132 Chain for World's Largest Paper Mill

THE International Paper Company, Three Rivers, Quebec, are building what will eventually be the largest paper mill in the world.

Back in 1920, this company made its first purchase of Link-Belt Chain and it is still working efficiently.

Satisfactory operation over so long a period has proved economical in many ways, evidenced by this new order for 19,500 feet of Link-Belt C-132 Chain.

Ask a Link-Belt Engineer to tell you more about this good chain. Write for a copy of our No. 400 catalog; it contains the complete Link-Belt line.

Hetzel Drive Wheels last from two to three times as long as the ordinary. There's a reason! Get particulars.

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Buffalo . . . 745 Ellicott Square
Wilkes-Barre, 826 Second National Bank Bldg.
Huntington, W. Va., Robson-Prichard Bldg.
Cleveland . . 329 Rockefeller Bldg.
Detroit . . . . 5938 Lindsale Ave.
St. Louis . . . . 3638 Olive St.
Kansas City, Mo., R. 436, 1002 Baltimore Ave.
Denver . . . . 520 Boston Bldg.
Minneapolis, Minn. . . . . Link-Belt Supply Co., 416 S. Third St.
Louisville, Ky. . . 321 Starks Bldg.
Ashland, Ky. . . . . V. P. Dalmas & Co., 100 W. Winchester Ave.
New Orleans . 504 Carondelet Bldg.
Whitney Supply Co., Ltd., 733 Tchoupitoulas St.
Birmingham, Ala., 720 Brown-Marx Bldg.
Atlanta, 610 Citizens & Southern Bank Bldg.
Toronto 2, and Montreal, Link-Belt Limited

H. W. CALDWELL & SON CO.:—Chicago, 1700 S. Western Ave. New York, 2676 Woolworth Bldg. Dallas, Texas, 610 Main St.
LINK-BELT MEESE & GOTTFRIED CO.:—San Francisco, 19th and Harrison Sts. Seattle, 820 First Ave. S. Portland, Ore., 67 Front St.
Los Angeles, 400 E. Third St. Oakland, Calif., 526 Third St. Fresno, Calif., 215 Briz Bldg.

LINK-BELT

THIS YEAR LINK-BELT IS FIFTY YEARS OLD

CONSTRUCTION NEWS

A Summary of Vital Facts Regarding Construction, Finances and Operation of Paper Mills

Construction News

Ashland, Wis.—The Lake Superior Paper Company has awarded a general contract to the Fluor Brothers Construction Company, 52 Otter street, Oshkosh, Wis., for extensions and betterments in its two-story mill, including the remodeling of a portion of the structure, estimated to cost close to $50,000. Work will be placed under way at once.

Toledo, Ohio.—The Butler Paper Products Company, 16 Broadway, has tentative plans under way for the erection of a new building at Funston and Sylvania avenues, to be two-story and basement, 50 x 100 feet. It will be used primarily for storage and distributing service. S. E. Butler is president. Mills, Rhines, Bellman & Nordhoff, 1234 Ohio boulevard, Toledo, are architects.

Philadelphia, Pa.—The McDowell Paper Mills, Manayunk, have filed plans for the construction of a one-story building on the River road, near Levering street, to be used for general storage purposes. The estimated cost has not been announced.

St. Paul, Minn.—The Waldorf Paper Products Company, Myrtle and Pillsbury avenues, has work under way on its proposed new lower plant at Hampden and University avenues, to be one-story, 56 x 100 feet, and will arrange for the equipment installation at an early date. A general contract for building has been let to the Paul Steenberg Construction Company, Builders' Exchange, St. Paul. A contract for a stack has been given to the Continental Chimney Company, Inc., Chicago, Ill., to be 250 feet high. The entire plant will cost close to $100,000, with machinery. H. A. Sullwold, 107 East Third street, is architect.

Bellingham, Wash.—The Westminister Paper Company is perfecting plans for the early erection of a new mill at Army and Chestnut streets, to be one-story, designed primarily as a finishing mill, estimated to cost $80,000. At a later date, other units will be erected, including a converting mill, the entire project to cost approximately $300,000. It is proposed to have the first unit ready for service by the close of the year. J. J. Herb is president, in charge.

Ithaca, N. Y.—The Brown Paper Mill Company, Albert G. Brown, president, is said to have preliminary plans under way for the rebuilding of its local mill on East Lincoln street, recently destroyed by fire, with loss reported at $40,000, including equipment. The reconstruction will cost close to a like amount.

Plaguemine, La.—S. E. McElheney, Avery Island, La., and associates, are reported to be planning the construction of a new paper mill on local site, with initial unit to cost in excess of $75,000, with equipment. It is said that a company will be formed to carry out the project.

Nutley, N. J.—George La Monte & Son, manufacturers of special processed papers, have awarded a general contract to Henry M. Doremus & Company, 36 Orange street, Newark, N. J., for their proposed one-story brick and steel addition on the Kingsland road, to be 50 x 100 feet, equipped for color-mixing, etc. The structure will cost about $34,000. Fletcher-Thompson, Inc., 542 Fairfield avenue, Bridgeport, Conn., is engineer.

Chicago, Ill.—The American Envelope Company has disposed of a tract of its property at 3070-82 West Grand avenue, totaling 46,000 sq. ft. of land, for a consideration of $33,000. A factory is projected for another line of manufacture.

Lambertville, N. J.—The Poquonock Bag and Paper Company is reported to be planning the construction of a new mill on local site for the manufacture of paper bags and containers, estimated to cost in excess of $85,000, including equipment. It is proposed to select an engineer to prepare plans and specifications at an early date.

Clewiston, Fla.—The Celotex Company, 645 North Michigan avenue, Chicago, B. D. Dahlberg, president, manufacturer of composition board products, is said to have preliminary plans under way for the erection of a new mill on a local tract of property, recently acquired. The initial unit will consist of a number of buildings, with power house, machine shop and auxiliary structures, estimated to cost close to $1,500,000, with machinery. It is likely that actual construction will be deferred for a number of months

New York, N. Y.—The Union Bag and Paper Corp., Woolworth Building, is said to be planning machinery changes and the installation of new equipment at its different mills to provide for future operations under the Raymar process of pulp manufacture, for which experiments have been in progress a number of months.

New Companies

Boston, Mass.—The Century Paper Company has been incorporated with a capital of $10,000, to deal in paper products. James F. Halloran, 184 Middle street, Braintree, Mass., is president and treasurer.

Chicago, Ill.—The Reinforced Paper Bottle Corporation, of Illinois, has been incorporated with a capital of $50,000, to manufacture paper containers of various kinds. The registered office is at 730 North Franklin street. The incorporators are William N. Smith, Justus Chancellor and William H. Potter.

Wilmington, Del.—The Dixie Pulp and Paper Company, care of the Corporation Service Company, Equitable Building, Wilmington, representative, has been incorporated with a capital of $5,000,000, to manufacture pulp and paper products.

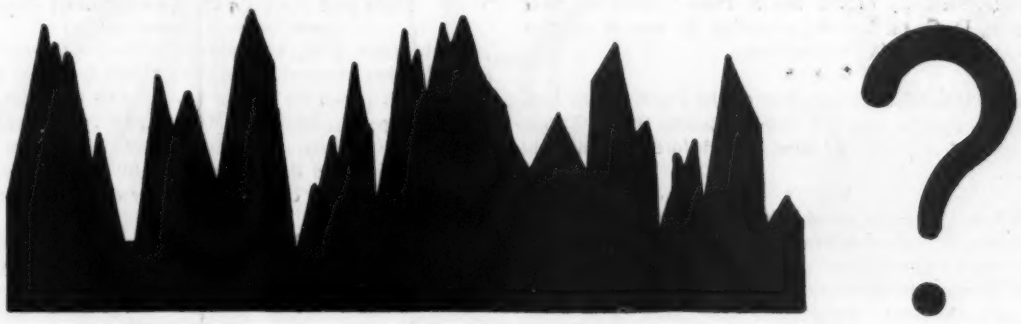
Milford, Conn.—The New England Corrugated Box Company, Inc., has been incorporated with a paid-in capital of $10,000, to manufacture corrugated paper containers. Robert H. Soden, Milford, is president; and Lorraine S. Ransom, New Haven, Conn., secretary.

New York, N. Y.—The Elbema Paper Corporation has been incorporated with a capital of 100 shares of stock, no par value, to manufacture and deal in paper products. The incorporators are T. F. Turley, H. M. Mann, and T. F. Tormey. The company is represented by J. A. Turley, 233 Broadway, New York.

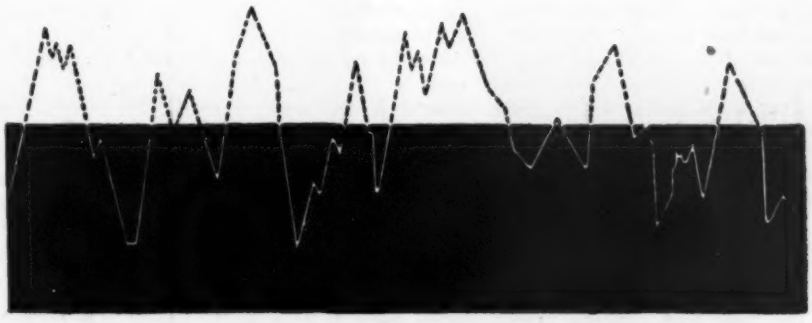
Wilmington, Del.—The Durus Fibre Corporation, care of the Corporation Trust Company of America, du Pont Building, Wilmington, representative, has been incorporated with a capital of $500,000, to manufacture fibre products.

Philadelphia, Pa.—Harvey Shevlin, 1922 North Franklin street, has filed notice of organization of the Shevlin Paper Company, to deal in paper specialties.

WHY TOLERATE
A BOILER LOAD LIKE THIS



MAKE BOILER LOAD CONSTANT BY INSTALLING
RUTHS STEAM ACCUMULATOR



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DIESEL OIL ENGINES

HEAD OFFICE—TORONTO

VANCOUVER, MONTREAL, WINNIPEG

New York Trade Jottings

Norman W. Wilson, Vice-President of the Hammermill Paper Company, of Erie, Pa., and President of the American Pulp and Paper Association, was a prominent visitor to New York last week.

* * *

Many leading members of the paper industry visited the tenth Chemical Trade Exposition at the Grand Central Palace, New York, where they found much to interest and instruct them.

* * *

R. S. Kellogg, secretary of the News Print Service Bureau, and W. B. Bullock, secretary of the Import Paper Committee, were in Washington, D. C., on Monday, attending the general meeting of the American Forest Week Committee.

* * *

J. E. Hanny, General Superintendent of the Pacific Mills, Ltd., Ocean Falls, B. C., who returned from a business trip to Europe last week, spent a few days in New York before proceeding to headquarters.

* * *

R. S. Kellogg, chairman of the National Forestry Program Committee, and several members of that committee, appeared before General Lord, Director of the Budget at Washington, D. C., on Monday, in connection with forestry items in the Federal Budget 1926-1927. Many items were taken up in detail with the Director. The largest appropriation asked included $3,000,000 for forest purchases under the McNary-Clarke Law, and $1,500,000 for cooperative forest protection under the same law. An appropriation of $100,000 was asked under the same law for cooperative distribution for forest planting stock and the same amount under the same law for cooperative farm forestry.

* * *

Sir Arthur Shirley Benn, first vice-president of the Southern Paper Company, of Moss Point, Miss., arrived in New York on Monday morning aboard the Cunard liner *Caronia*, at the head of the British delegation to the International Interparliamentary Congress, which is being held at Washington, D. C. On Monday evening, the British delegates were the guests of the English Speaking Union of the United States at a dinner at the Hotel Roosevelt. John W. Davis, former U. S. Ambassador to Great Britain, who is president of the English Speaking Union, presided at the dinner. Sir Arthur Shirley Benn, the principal speaker of the evening, briefly outlined the unsettled conditions prevailing in most of the countries of Europe since the war and largely as a result of it. He spoke of the urgent need of co-operation among the nations if the wounds of the war were to be healed.

* * *

Cabled advices just received announced that the Stockholm offices of M. Gottesman & Co., Inc., New York, formerly located at Stureplan 13, will be moved on October 1 to Kungstradgardsgaten 10, Stockholm, Sweden, where their growing European interest will be housed in more spacious and more conveniently located quarters. The Stockholm branch is operated at a Swedish Corporation, named M. Gottesman & Co., Aktiebolag, and a completely organized office staff is maintained for the exclusive handling of the parent companys extensive interests in the wood pulp industry abroad. M. Gottesman & Co., Inc., whose New York offices are at 18 East 41st street, are the exclusive sales agents in the United States for a number of Swedish and Continental manufacturers of bleached and unbleached sulphite and kraft pulp. M. Gottesman & Co. were established in 1886.

A. P. W. Paper Co. Receives Pulp Shipment

[FROM OUR REGULAR CORRESPONDENT]

ALBANY, N. Y., September 25, 1925.—A large force of workmen is engaged in handling shipments of pulp at the mill of the A. P. W. Paper Company in North Albany. Thousands of tons have already been received and additional shipments are coming in regularly. During the past week the Norwegian steamship "Urter" arrived from Nova Scotia with 2200 tons of pulp for the company. Officers and members of the crew reported a most stormy trip during which more than 100 bales of pulp were washed overboard. The "Urter" sailed from Sheet Harbor, Nova Scotia, September 12 and the second day out encountered high seas which tore away the deck cargo of pulp. The ship docked at New York City, where 1000 tons of pulp were unloaded and sent to Albany by lighter, the ship making the trip up the river with the remaining 1200 tons.

Bids and Awards for Government Paper

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., September 30, 1925—The Government Printing Office has received the following bids for 9,250 lbs. Green Mimeograph Paper, 21-½ x 32-½—37: Old Dominion Paper Co. .0919 cents per lb., Dobler & Mudge, .0997 cents American Writing Paper Company, .0825 cents Maurice O'Meara Company, .0925 cents Stanford Paper Company, .101764 cents Garrett-Buchanan Company, .1225 cents Barton, Duer & Koch Paper Company, .105 cents.

The Government Printing Offices has received the following bids for 3,000 lbs. Back-lining Paper, for Cass-making Machines, 24" rolls: Mathers-Lamm Paper Company, .0453 cents per lb. R. P. Andrews Paper Company, .046 cents per lb. Barten, Duer & Koch Paper Company, .0475 cents per lb. Oid Dominion Paper Company, .0459 cents per lb. Reese & Reese .0445 cents per lb. Lindemeyr & Harker .0463 cents per lb.

The Bryant Paper Company has been awarded the contract for furnishing the Printing Office with 80,000 lbs. 25 x 38—50 various size white mimeograph paper at .092 cents per pound. The Carew Manufacturing Company will furnish 1810 pounds of 22-½ x 28-½—181 white index Bristol board at .26 cents per pound. Bids for both of these items were received on September 9.

The Government Printing Office will receive bids on October 2 for 13,275 pounds (75 reams) of 26 x 42—144 rape Manila paper.

The Printing Office has received the following bids for 12,900 lbs. White Bond Paper, 21 x 32—43: Aetna Paper Company .1491 cents per lb; R. P. Andrews Paper Company, .167 cents; Barton, Duer & Koch Paper Company, .1535 cents; American Writing Paper Company, .16 cents; Old Dominion Paper Company, .1994 cents; Dobler & Mudge, .20 cents; and Lindemeyr & Harter .251 cents.

The R. P. Andrews Paper Company has been awarded the contract for furnishing the Government Printing Office with 58,469 pounds (305 reams) of 25 x 40—128.4, first class chart paper at 27.24 cents per pound, bids for which were received on September 9. The Dobler & Mudge Company will furnish 5,000 pounds of yellow manifold paper in 17" rolls at 20.66 cents, bids for which were received on September 11.

Reese & Reese will furnish 2,000 pounds of 16 x 2—14½, No. 16 white bond paper at 29.49 cents per pound bids for which were received on September 11 and the same firm will also furnish 3,000 pounds of back lining paper at 4.45 cents per pound, bids for which were received on September 14.

Waste Men's Advisory Board to Meet

The National Association of Waste Material Dealers announces that the meeting of the Atlantic States Advisory Board will be held in Newark, N. J., on October 8. The information covering shipments for the last quarter of 1925 is essential for the report of the paper and pulp committee. The wood pulp and paper stock dealers are urged to make a special effort to return the blanks sent them by the Board without delay. The returns formerly made were not complete and it is hoped that all will respond without delay and give the Board the fullest co-operation. This meeting is arousing great interest in the waste material trade and all indications point to an excellent attendance.

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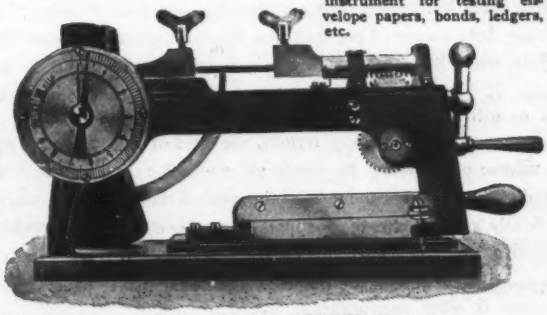

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PAPER
The Magazine of the Paper Industry

HENRY J. BERGER, Editor

Member A. B. C. Audit Bureau of Circulations

Vol. LXXXI New York, October 1, 1925 No. 14

BUSINESS ACTIVITY EXPANDING

The expansion of business activity is becoming more general and more pronounced according to a survey just completed by the Guaranty Trust Company, of New York. Together with increased industrial output and well sustained distribution to consumers, there are indications that the placing of forward orders in certain important lines is occurring on a larger scale than at any other similar time in recent years.

The mere fact of increasing activity, however, means less than usual at this season. Some degree of revival after the customary summer slackening is almost inevitable. In forming a judgment as to the probable permanence of the higher levels, it is necessary to make such allowance as may be possible for the purely seasonary factors, and to weigh carefully the more fundamental conditions bearing on the general situation.

Significant in this connection is the fact that basic industrial output (aside from the usual seasonal movement) increased in July after a series of declines uninterrupted since the beginning of the year. The rate of iron and steel manufacture, which is fairly representative of general industrial conditions, turned upward last month after having declined continuously for four months. The average daily output of pig iron was about 1½ per cent higher than in July, while the corresponding gain in steel ingot production was nearly 11 per cent. Recent reports indicate that operations this month have been at considerably higher levels.

The movement of railway freight, the level of sales at retail, and the volume of payments by check, all continue to indicate that active distribution of commodities in general is being maintained. Especially striking are the loadings of revenue freght cars, which reached a new high mark during the last week of August, nearly two months in advanc of the usual seasonal traffic peak. This situation is very encouraging.

The agricultural situation, despite the extreme irregularity of crop weather, throughout the season, is such as to encourage the hope that increased farmers' purchasing power will be a stimulating factor during the remainder of this year and the early part of 1926. Extreme heat and absence of moisture have seriously damaged crops in some sections, with the result that present prospects are not so bright as those of the spring and early summer. Total farm income will probably be somewhat lower than a year ago. Moreover, immense planted areas rather than high acre yields will in most cases be the main factor contributing to the size of this year's crops. This fact will necessarily tend to advance costs and to reduce net returns.

Nevertheless, with fairly large crops selling, for the most part, at good prices, and with the notable progress made last year as a background, the end of the season should find most agricultural districts in a better position than a year earlier. Even a total income materially less than that of 1924 would be sufficient to permit further progress toward the liquidation of indebtedness and the revival of purchasing power. It is significant that manufacturers of farm machinery and fertilizers, representing two of the industries most directly dependent on agricultural prosperity, are outspokenly optimistic regarding the prospects for next season.

While there is no doubt that last year's farm operations marked a great upward stride from the depressed conditions which had obtained in almost all agricultural sections since 1921, the strong and immediate revival of purchasing power which the more optimistic observers anticipated was only partially realized. At that time most farming districts were only beginning to emerge from depression, and the foregoing years had left a volume of unpaid debts which constituted the first claim on farmers' income, and which greatly reduced the sums that would otherwise have been available for the purchase of goods. The effects of good crops and price recovery should become evident in the near future.

CANADIAN PAPER EXPORTS INCREASE

Canadian exports of pulp and paper in August were valued at $12,600,610, according to a report issued by the Canadian Pulp and Paper Association. There was an increase in value of $691,191 over the total for July and of $1,695,190 over August 1924.

The August total included pulp valued at $3,822,157 and paper valued at $8,778,453 compared with values in July of $3,790,953 and $8,118,466 respectively.

The exports of newsprint for August were 116,232 tons, valued at $8,204,092, as compared with 94,486 tons, valued at $7,020,384 for August of last year. The exports of wrapping paper for August were 1,936 tons, valued at $254,484, as compared with 1,809 tons, valued at $266,774 for August of last year. The exports of book paper were 5,641 cwts. valued at $50,659, as compared with 2,150 cwts., valued at $16,920 for August of last year. The exports of writing paper were 843 cwts., valued at $7,335, as compared with 1,849 cwts., valued at $17,347 for August of last year and the exports of paper of all other varieties were valued at $261,883, as compared with $340,581 for August, 1924.

The exports of mechanical pulp for August amounted to 24,458 tons, valued at $699,433, as compared with 19,032 tons, valued at $566,479 for August of last year. The exports of sulphate pulp for August were 14,253 tons, valued at $865,709, as compared with 11,036 tons, valued at $647,675 for August 1924. The exports of unbleached sulphite pulp for August were 20,926 tons, valued at $1,103,736 as compared with 18,758 tons, valued at $968,847 for August of last year. The export of bleached sulphite pulp for August were 14,734 tons, valued at $1,153,279, as compared with 14,728 tons valued at $1,060,413 for August 1924.

Exports of pulp and paper for the first eight months of the

year were valued at $97,833,859 as compared with a total value of $91,393,867 in the corresponding period of 1924. This is an increase for the current year of $6,439,992; of which amount, $4,072,460 represents the increased value of the exports of wood pulp and $2,367,532 the increase in exports of paper.

Pulpwood exports for the first eight months of the year were 1,067,780 cords, valued at $10,538,837 compared with 994,072 cords valued at $10,083,428 exported in the corresponding months of 1924.

August News Print Statistics

Production of news print in the United States during August, 1925, according to the News Print Service Bureau, amounted to 120,902 tons and shipments to 119,752 tons. Production in Canada amounted to 120,656 tons and shipments to 120,272 tons; making a total United States and Canadian production of 241,558 tons and shipments of 240,024 tons. There was also 8,475 tons of news print made in Newfoundland and 1,155 tons in Mexico in August, so that total North American production for the month amounted to 251,188 tons and for the first eight months of the year to 2,049,395 tons. The news print mills also made 1,922 tons of hanging paper, 456 tons of which were made in Canada. Stocks of news print paper at United States mills totalled 35,077 tons at the end of August and at Canadian mills 23,564 tons, making a combined total of 58,641 tons which was equivalent to 5.4 days' average production. During August the United States mills operated at 83.7 per cent of capacity and the Canadian mills at 89.7 per cent.

Comparing production during the first eight months of 1925 with same period of each of the five previous years the United States mills made 2 per cent more than in 1924, and 1 per cent less than in 1923, 6 per cent more than in 1922; 23 per cent more than in 1921, and 2 per cent less than in 1920; the Canadian mills produced 9 per cent more than in 1924, 18 per cent more than in 1923, 41 per cent more than in 1922, 93 per cent more than in 1921, and 68 per cent more than in 1920.

The combined production of the United States and Canadian mills for the first eight months of 1925 was 5 per cent more than in 1924, 7 per cent over 1923, 21 per cent over 1922, 50 per cent over 1921, and 24 per cent over 1920. There was a production of 49,563 tons in Newfoundland and 8,589 tons in Mexico during the first eight months of 1925.

Co-operating in St. Maurice Valley to Cut Costs

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., September 28, 1925.—The St. Maurice Valley presents many problems to the paper companies, the solution of which brings their interest into the common melting pot. These common questions revolve around the fact that the various companies use a common highway, the St. Maurice River, to convey a large portion of their raw materials to their mills. The result has been the formation of various companies or associations to combat the problems brought about in the handling and protection of the huge mass of wood and forest which belongs to those various companies and have to be conveyed to their respective mills when cut. To accomplish this was formed the St. Maurice River Boom and Driving Company, Limited, the operating expenses are pooled and paid according to work done by the various pulp and paper firms in the St. Maurice Valley. In addition to this operating company, there is the St. Maurice Forest Protective Association, Limited, which works for the various companies interested in limits. These companies save the individual pulp and paper corporations from the necessity of having separate organizations at much heavier overhead to accomplish the work done. In one instance, two companies, Laurentide and Belgo, own one block of limits (comprising 800 square miles) between them and operate their cutting costs at minimum by having one organization to handle the work.

Waste Material Dealers to Meet

The Fall meeting of the National Association of Waste Material Dealers is to be held at the Hotel Peabody, Memphis, Tenn., on Tuesday, October 6. The Memphis members are planning to give to the visiting members a banquet, which will be held at the Claridge Hotel on the evening of October 6, and will be informal. An invitation from the Memphis members is extended to all members who intend to be at the meeting.

There will be a meeting of the Southern Division at the Hotel Peabody, Memphis, on Tuesday, October 6, at 10 a. m. The general meeting of the association will be held at 2:30 p. m. the same day and will be preceded by an informal luncheon.

It is possible that sufficient members from New York, Philadelphia and vicinity may decide to make the trip, to make it possible to put on a special car. Any eastern members who would like to arrange to go down with a party in a special car should get in touch with H. F. Masman, manager of the traffic department of the association.

The next meeting of the Western Division will be held at the Congress Hotel, Chicago, on Thursday evening, October 8, at about 8 o'clock. These meetings are always preceded by a dinner, which will be served at 7 p. m.

All details in connection with this meeting are in the hands of L. J. Messinger, 41st and Wallace streets, Chicago, from whom reservations should be obtained.

President Frankel, as well as the Secretary and Mr. Masman, manager of the Traffic Department, will all be in attendance at the meeting of the Western Division, and it is expected some of the eastern members attending the meetings at Memphis will also come back by way of Chicago so as to attend the meeting of the Western Division.

Among the new members recently elected to the association were the Continental Paper Grading Company, of 1451 South Peoria street, Chicago, and the North Adams Paper Stock Company, of 112 Ashland street, North Adams, Mass.

Safety Council Meets at Cleveland

[FROM OUR REGULAR CORRESPONDENT]

CLEVELAND, Ohio, September 28, 1925.—The National Safety Council held its fourteenth annual safety congress here, beginning today and lasting all during the week.

The first session of the Paper and Pulp Section was held at the Statler Hotel Tuesday morning and was followed by additional sessions at the same hotel on Wednesday and Thursday.

"Management Responsibility" was discussed at the luncheon Wednesday noon and there was a round table discussion at the session Thursday morning on "Our Most Unusual or Troublesome Accident."

Among the papers presented at the various sessions were the following:

"Body-Inflicted Accidents," D. B. Davies, General Superintendent, Hoberg Paper and Fibre Company, Green Bay, Wis.

"Safety in Relation to the Future of the Paper Industry," Dr. Hugh P. Baker, Secretary, American Paper and Pulp Association, New York City.

"The Nurse's Place in the Reduction of Lost-Time Accidents," Mrs. P. I. Ostrander, Supervising Nurse, International Paper Company, New York City.

"Close-Ups on Paper Mill Guarding," E. E. Jones, Engineer, Surety Guard Company, Chicago.

"The Philosophy of Safety," Judson G. Rosebush, General Manager, Northern Paper Mills, Green Bay, Wis.

"The Safety Inspector and the Full Co-operation of Plant Organization," A. S. Wilson, Safety Engineer, American Writing Paper Company, Holyoke, Mass.

"The Combining of Health and Accident Service by Industry," Alexander R. White, Chief Sanitary Inspector, Province of Ontario, Toronto, Canada.

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Technical Association of the Pulp and Paper Industry

AN ORGANIZATION FOR THE ENCOURAGEMENT OF ORIGINAL INVESTIGATION AND RESEARCH WORK IN MILL ENGINEERING AND THE CHEMISTRY OF PAPER, CELLULOSE AND PAPER-MAKING FIBERS GENERALLY; IT AIMS TO PROVIDE MEANS FOR THE INTERCHANGE OF IDEAS AMONG ITS MEMBERS IN ORDER THAT PROCESSES OF MANUFACTURE MAY BE MADE MORE EFFICIENT AND IMPROVED ALONG TECHNICAL LINES.

Conducted by W.G.MacNAUGHTON, Secretary

Colored Back Water and Two Sidedness in Paper Mills *

By J. R. Roberts, of the Dyestuffs Dept. of E. I. du Pont de Nemours & Co.

Two of the problems which confront paper makers as often as any others are colored backwaters and two-sidedness of the finished sheet. These two problems go hand in hand as dyestuffs that give colored backwaters usually produce a two-sided sheet. The latter problem was not of importance years ago when machines ran slowly and suction couch rolls had not been invented. Now, in modern mills using high speed machines equipped with suction couch rolls, two sidedness, or the elimination of it, is an important problem.

Little Printed on These Problems

There is very little in paper literature on these problems and particularly on two-sidedness. Opinions as to cause and cure vary and it may be that most men in the industry hesitate to put their opinions into print. However, truths and right conclusions are reached much quicker by discussion and freely expressed opinions and I shall give the conclusions I have reached after 25 years' experience in coloring paper stock, even at the risk of criticism, which I hope will be constructive.

As before stated, colored backwaters and two-sidedness are closely related but the former will be discussed first as an aid to the better understanding of the latter. The retention of a dye-stuff depends to a large extent on its affinity for the fiber and also on the method, so to speak, of its dyeing the fiber. Basic and direct colors actually dye the fibers themselves while pigments and also acid colors in a way, accomplish this result by a mechanical entanglement in the fibers of the sheet.

Basic colors have a decided affinity for unbleached cellulose and unless the shade is very deep the backwaters are usually clear, and incidentally the sheet is free from two-sidedness. On unbleached sulphite, sulphite and groundwood these dyestuffs may be used without a mordant, if so desired, with usually clear backwaters. On bleached stock alum is usually necessary and in some cases even then the retention is poor. There are exceptions to this rule. Safranine being a color that works exceptionally well on bleached rag without alum. However, basic colors and bleached stocks need not be discussed as these stocks usually require faster to light colors.

Cause More of This Trouble Than Others

Colored back-waters usually accompany the use of acid colors and in general it may be said that this type of dyestuff causes more of this trouble than any other. Acid colors have no particular affinity for the fibers but depend for their coloring property on entanglement with, or dyeing of, the precipitated size and alum. Therefore, it is always essential that size and alum be used with acid colors. Some of them, such as Tartrazine, seem to have no affinity for fiber or size and cannot be used as beater colors.

The retention of acid dyestuffs may be increased and the backwaters made clearer by using excess size and alum, or all that the sheet will stand and still retain the desired properties. In the case of some acid dyestuffs it is possible to use other mordants to aid retention. Two per cent of lead acetate added to Eosine will clear the backwaters and at the same time tend to prevent the mottling or "burning" of the dyestuffs on the driers. Aluminum acetate is beneficial when used with most acid colors, Crocein Scarlet probably being the one most improved| However, it may be said that when acid colors are used in heavy shades it is impossible to clear the backwaters entirely. If for any reason the backwaters must be cleared up, or too much dyestuff is being lost for economy, the only remedy is to change to direct colors.

Give Clearer Back Waters

The direct colors give clearer backwaters than any of the other types of dyestuffs. In heavy shades it is sometimes necessary to add salt to the beater (5 per cent to 10 per cent) and heat the stock from 130° Fahr. to 150° Fahr. thus "salting out" the dyestuff on to the fiber. This procedure together with the addition of alum if the use of the latter is permissible in the sheet, will render the backwaters practically clear.

Pigments such as lamp black, ochre, umber, etc., require the addition of alum, but not necessarily size, for their retention. In light shades the backwaters are practically clear but in heavy shades more or less of the pigments are sure to be lost. These coloring agents act much the same as filler or clay,—the higher the percentage used the lower the percentage of retention. However, pigments are cheap and the loss of a small percentage in the backwaters is not a vital factor.

Different Opinions

To refer again to different opinions on two-sidedness,—it was

* Delivered at meeting of the Technical Association of the Pulp and Paper Industry at Chemical Exposition, New York, week of September 28, 1925.

my privilege in April 1922 to attend a sectional meeting of TAPPI, at which the chief topic of discussion was two-sidedness. In this discussion opinions were about equally divided on hot dryers, excessive suction, beating of the stock, mixed furnishes, and too much water at the wet end as being causes of the two-sidedness. One participant in the discussion told of a machine making a two-sided sheet that was shut down without shutting off the stuff and the two-sidedness checked up the whole length of the machine. It was found that the sheet half way down the wire was as two-sided as that on the rele. This, together with the various opinions expressed, did not tend to clear the situation and the meeting adjourned without any definite conclusions having been reached.

It might be said in general that all the factors mentioned in the foregoing might contribute to a two-sided sheet and these will be briefly discussed. If the bottom or wire side of a sheet dyed with acid colors strikes the hot driers some of the dyestuff will be driven with the steam through the sheet and left on the top side which was deeper or more higher colored in the first place. With double deck driers this can be corrected to some extent by shutting of the steam from the first one or two driers which the bottom or wire side of the sheet strikes. In that way some of the color from the deeper colored top side of the sheet will be driven to the bottom side, tending to even up the color on the two sides.

Too much water and heavy suction may be mentioned together as the first is followed necessarily by the latter. If colors are not fixed firmly on the fibers, the more water used the more the washing action as the water goes downward through the sheet and wire. The wetter the sheet is, the more vacuum required in the suction boxes and couch roll. This suction, particularly on fast machines using high vacuum on boxes and couch roll, has a tendency to pull the color from the sheet on the bottom side.

Beating of the Stock

Beating of the stock, particularly on mixed furnishes, may also be a factor. With a mixture of rag and sulphite one may be hydrated more than the other. The more hydrated stock will show a deeper color than the less, and in the formation of the sheet on the wire one stock may float more than the other, this tending to produce two-sidedness.

With the exception of the beating of the stock, the aforementioned factors tend to show that two-sidedness, or absence of it depends to a large extent on how firmly the color is fixed on the fiber. This is the main point I wish to bring out and which I believe to be the biggest factor in overcoming two-sidedness. If it were possible to fix the dyestuff on the fiber so that it could not be removed by washing or excess water on the wire, by high suction, or affected by hot driers, the two-sidedness of paper could be reduced to a minimum. In evidence of this I will cite two experiences I have had in the last few years.

On one occasion I was called to a mill to run several shades of manifold and, as fastness to light was a factor, I used some of the faster to light acid colors and some pigments. I expected to run into trouble from two-sidedness but the machine was old and slow running (about 150 feet per minute) with the old style jacket and guard on the couch roll. The machine tender used as little water and as little suction on the boxes as possible and the sheets came over the machine practically free from two-sidedness. In this case the dyestuffs were not firmly fixed on the fibers but machine conditions were such that they were not washed or pulled from the sheet. Stock colored with similar formulas to run over a modern fast machine with suction couch roll produce very two-sided effects.

Another Case

At another time I had occasion to make several runs of deep black paper on a machine using high suction and a suction couch roll. One of the sheets was dyed with direct black shaded with small quantities of other dyestuffs. This was rather two-sided as was a run made with Paris Black as a base. The backwaters and suction waters in these runs were quite highly colored. Another run was made using basic colors set with tannic acid which fixed the dyestuff so firmly on the fibers that the hands were not even discolored when "feeling" of the stock in the beater. When this came over the machine the backwaters were clear and the sheet practically free from two-sidedness.

Of course this is an exaggerated case and it is hardly possible in ordinary shades to obtain dyestuffs that can be so firmly fixed on the fiber, that is dyestuffs that have all the desired properties. However, if direct colors which have the best affinity for the fibers are selected and other precautions connected with the paper machine taken to avoid two-sidedness, the trouble may be reduced to a minimum. These precautions include using salt and heat in the beaters if necessary, as little water and suction as possible, and hot driers to strike top side of sheet first, as some direct as well as acid colors are driven from one side of the sheet to the other. It should be remembered that formulas or dyestuffs do not work the same in all mills as conditions are different in different mills. A dyestuff or combination of dyestuffs may be satisfactory in one mill and give indifferent results in another and it is therefore necessary for each mill to study its own problems with a view to using formulas best suited to its own conditions.

TECHNICAL SECTION, PAGE 132

Says High Cost Mills Must Re-organize

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., September 30, 1925.—N. A. Timmins, president of the St. Lawrence Paper Mills, Limited, in his annual report to shareholders, submitted at the annual meeting in Montreal to-day, says: "The production of news print has been well consumed, all things considered. The value of news print is gradually declining as we enter the present period of over-production, and it is useless to hazard any opinion of its future value. High cost mills, wherever located, will turn to other products, and conditions in the news print industry will automatically re-establish themselves on an even level."

Dealing with his own company, he said that while the average selling price of paper for the period covered was lower than in the preceding year, the cost of production of paper for the period covered was also lower than in the preceding year. He continued: "Owing to both fundamental changes taking place in the sulphite pulp industry and to the fact that we will be able to manufacture this pulp at a price lower than market quotations, your directors have decided to erect and equip the sulphite mill which the original mill was designed to accommodate. This work started in June and will be in full operation in late October. Such surplus pulp as will be manufactured, having been sold on contract to the Wayagamack Pulp & Paper Company. Six per cent bonds have been sold to Nesbitt, Thomson & Co., to reimburse the company for that part of the new construction which we are entitled to, under the general deed of trust created for the first 6½ per cent bond issue."

To Investigate Pulp Thefts

[FROM OUR REGULAR CORRESPONDENT]

MONTREAL, Que., September 28, 1925.—The Department of Justice at Ottawa has ordered an investigation to be made by the Royal Canadian Mounted Police on the north shore of the St. Lawrence, where it has been reported that certain parties have illegally taken possession of privately owned timber limits and have stolen large quantities of pulpwood. Two officers accompanied by Detective George Roy, of Quebec, are leaving for the north shore where they may remain part of the winter to conduct their investigation.

Evaporating Black Liquor*

By R. W. MacGregor, Asst. Mgr., Ernest Scott & Co., Fall River.

The title to this short discussion covers a very important process in the pulp industry, and one which it is impossible to attempt to fully cover in the short time at my disposal.

The majority of those present are quite familiar with the evaporators department of a pulp mill and I therefore propose not to deal with the aspects of this subject which are already well known, but to direct your attention to what seems to me one of the most important features of the evaporator department.

A Vital Feature

You will all agree that the question of steam consumption in evaporating black liquor and obtaining the steam at the lowest possible cost is a most vital feature of this important section in pulp manufacture.

In order to operate a mill under the most economical conditions the recovery house must be given close study.

The average mill manager wants to know, when planning alterations or extensions to the recovery plant, what amount of steam is going to be required, because we must give consideration to the power or boiler house at the same time.

In many pulp mills it has become necessary to enlarge the recovery equipment in order to take care of increases in the digester room, and when this has to be done it is nearly always necessary to increase the boiler capacity in order to take care of the increased amount of black liquor which ensues. There may be instances where sufficient boiler capacity is available, but in the majority of cases this would not be so.

Most mills are using disk evaporators for partially concentrating the black liquor, and in so doing are making some use of the so-called waste heat from the rotaries. I say "waste heat," but is that a correct interpretation? In a good many cases it is not. It certainly is not the case where vacuum evaporators are not in use and I think in a good many other instances also. In mills without vacuum evaporators it is always necessary to burn valuable wood in the smelting furnaces in order to raise sufficient heat to maintain combustion in the rotaries and I maintain, then, that the heat units so obtained cannot truly be called waste heat even though that heat be utilized in the disks. It is argued that the mill is saving fuel by using the heat units from the rotaries in order to operate the disks, yet I question the real economy of this method when such valuable material has to be burned in order to create that heat.

An Illustration

One instance with which I actually came in contact prior to the installation of vacuum evaporators, will make my meaning more clear. At that mill four men were employed in wheeling slab wood to the smelters in order to raise sufficient heat to keep the black liquor under control in the rotaries. In other words, labor (expensive in first cost and in operation) and in place of these install modern steam raising boilers behind the rotary furnaces.

The steam raised in such boilers can be in turn used in the multiple effect evaporator where the benefit of the number of multiples is obtained. That really means that three or four times the amount of water can be evaporated in this manner than could possibly be done where the rotary flue gases are used in disc evaporators. In European mills this method of steam raising has been adopted and I question if any new mill will be designed which does not incorporate such a scheme. So great is the economy obtained that I feel the matter is worth more consideration by mill executives here.

Objections will probably be raised to the method and probably the most serious objection will be that soda will be lost in the flues because under present conditions the disk evaporators act as a trap for soda carried over in the flue gases. However, by having the flues in the brickwork of the boiler properly designed, any soda carried over may be trapped and removed from the flues. The type of boiler most suited for such steam raising is the straight fire tube or loco type having fairly large tubes for ease in cleaning. The old Lancashire type can also be used. The former will be quicker in steaming and the latter has the advantage of having a large steam space and not quite so likely to show quick steam fluctuations. The brickwork setting should be such that easy access is provided for cleaning purposes and, if possible, arrangements made in the main flue for by-passing the gases in order to allow of repairs or cleaning being carried out during the working period, should this become necessary.

Steam Raising Capacities

It will be interesting to look for a few moments at the steam raising capacities of certain black liquors. The figures which I am about to give you have been obtained from British soda pulp mills all operating on esparto grass, and while the black liquor obtained with the sulphate process in this country may not be of exactly similar composition, yet the two liquors are sufficiently akin to allow of comparison.

Method Employed by Swedish Mills

Swedish mills also employ this method of steam raising very successfully, and it may be taken that the Swedish and North American mill black liquors very closely resemble each other, and that in Southern States' mills, using southern yellow pine wood for pulp making, even more heat units are available for this purpose.

In each of the seven cases I now cite careful tests have been made and it is interesting to note that the coal value of black liquor, is represented by B.t.u., is similar in all cases where the strength of the black liquor is practically the same.

	MILLS						
	A	B	C	D	E	F	G
Tw. of Black Liquor	60°	58°	56°	59° to 63°	55°	42°	36° -34°
Temp. of Black Liquor	100°C	67°	65°	66°	83½°	85°	
% of mineral matter	19.48	18.80	21.20	20.03	21.02	14.95	14.00
% of Na_2O	10.46	10.73	12.35	10.99	12.79	8.44	8.20
% of organic matter	47.84	37.80	36.80	35.65	34.43	30.29	28.06
Heat available in 100 gals. of black liquor in B.t.u.'s	4,574,720	3,823 380	3,823,380	3,522,560	3,619,840	2,361,000	2,754,560
Equivalent in coal (12,000 B.t.u.'s)	364#	308#	308#	266#	266#	196#	224#

and wood were being used. Such a method is not only uneconomical but it is distinctly wasteful because that wood had far better be converted into pulp.

You will ask how this can be avoided. The answer is to do away with the old cumbersome and expensive disk evaporators

In the case of Mill "A," which has a capacity of 46 tons of esparto grass per day with an 85 per cent recovery, it has approximately 3,650 pounds of concentrated black liquor hourly. Each pound of liquor represents 4,600 B.t.u.'s, and calculating on 12,000 B.t.u. per pound of coal we have with 3,650 pounds of concentrated liquor a capacity equal to 1,400 pounds of coal hourly, and with an efficiency of 8 pounds of steam per pound of coal equal to

* Delivered at meeting of the Technical Association of the Pulp and Paper Industry, New York, week of September 28, 1925.

11,200 pounds of steam hourly. In this particular mill they produce approximately 2,500 gallons of weak black liquor hourly and this, concentrated, represents 300 gallons of 60 per cent Tw liquor, showing an evaporation of 2,200 gals. of water per hour required. (All of these figures are given in imperial gallons.) We have, therefore, approximately 22,000 pounds of water to evaporate which, if done in quadruple effect at as low a rate as 3 pounds of evaporation per pound of steam, requires 7,334 pounds steam hourly for evaporating the weak black liquors to 60 per cent Tw.

As I have stated above, the B.t.u.'s in the concentrated black liquor are equal to providing 11,200 pounds of steam hourly and so can provide 3,866 pounds of steam hourly in excess of what is required for evaporating the weak liquor in the quadruple effect evaporator. This surplus steam can be used at the causticizing plant.

I have been informed, on very good authority, that in one mill in Europe 8,000 pounds of steam are being raised in this manner per ton of sulphate pulp produced, and that in one case only 250 pounds of coal per ton of pulp are required for the entire mill, i. e., with pulp making and black liquor recovery, and all other steam using parts included.

With these figures before us, does it not seem absurd to continue wasting wood and wasting labor in providing heat to do evaporating work, when the required amount of heat is already available if properly harnessed.

Many mills in Europe, as I have said, are using waste heat boilers and I can see no reason why this method of using real waste heat, by which I mean heat that in any case is available as a waste product as distinct from the present method of created waste heat, cannot be applied successfully in this country. That the value of the feature to which I have directed your attention has already been appreciated by some mills in this country is apparent from the fact that some work was done along these lines, but, owing to difficulties with the boiler flues, was discontinued. In these cases boilers with small flues were used and quickly became choked. The tubes were obviously too small and the conditions necessitate the use of large flue tubes.

Another further economy may be made by installing behind the waste heat boiler, suitable economizers whereby the temperature of the black liquor may be raised almost to boiling point en route to the vacuum evaporators.

An Insulated Paper Mill Roof*

By B. C. J. Beckwith, Sales Engineer, Johns-Manville

The roofing problem of a paper mill is one which has received considerable attention for many years, both in this country and in Canada. Until the present time, it appears that no entirely satisfactory solution has been advanced to meet the very difficult condition over the machine room. Statistics show that common types of construction have an average life varying from eight to ten years; some, under particularly adverse conditions, not even lasting that long.

It is common knowledge that in the machine room there are ever present large quantities of water in vapor form, often combined with weak acids and other chemicals that may have a corrosive effect on the building—particularly the roof.

This water vapor readily condenses when it comes in contact with the underside of the roof construction.

Condensation may be largely eliminated by the use of a proper hood over the machine, by proper ventilation, and by proper roof insulation, but it is the intent of this article to discuss only the roofing question.

Ideal Roof Requires Little Maintenance

We might say that the ideal roof is one requiring little, if any, maintenance, is rot-proof, is fire-resisting, and lastly, has proper insulating value—the last helping to eliminate the condensation evil.

Permit me at this time to describe the construction of what might be termed an ideal roof, as laid by Johns-Manville, Inc. This construction is applicable to either a flat or a pitched type of roof and is to be laid over skeleton steel or wood (preferably steel) framework.

Suitably sized steel purlins are arranged on not over 45 inch centers. The top side of the purlin, at least, should be given heavy paintings or other protection as a preservative.

The steel is overlaid with homogeneous sheets of deeply corrugated Johns-Manville Asbestos Wood 42 inches wide and approximately 3-8 inch in thickness. The wide sheets mentioned eliminate a large percentage of side laps generally found in corrugated materials and hence cut down the chance of lap leakage. These asbestos corrugated sheets are manufactured with one rough pebbled side and one smooth side. The smooth side is turned down to view from the interior and the rough side turned up, so as to form a bond for the subsequent layers. The material is furnished either in natural gray or impregnated with asphalt. The impregnated sheets will be better for severe conditions, as they have practically no absorption value. The material as applied over the steel shall have two corrugations side lap and 6 inch end lap—end laps shall occur only over supporting steel. All laps are to be tightly bedded down in asbestos roof putty, so as to make the application as air and gas tight as possible.

Asbestos Sheet Centering

This asbestos corrugated sheet centering—as it may be termed—shall be securely fastened to the steel members with a suitable type of non-corrosive fastener of heavy design and cross-section. It is obvious that necessary holes must be drilled in the asbestos sheet to accommodate the fastener. These holes must also be made tight. This result may be obtained by the use of either a lead or an impregnated asbestos felt gasket underneath the metal washer at the fastener head.

After the asbestos wood has been properly applied as detailed above, the whole deck thus formed is to be given a heavy mopping of asphalt roofing cement of such a mixture that it will remain "tacky" after hardening.

A light weight galvanized iron wire mesh is now stretched over the top of the corrugations and secured to the fastener heads with small tie wires. This acts as a reinforcement to the poured slab to follow, and also acts as a key to prevent slippage on steep roof construction.

The deck is now ready for the next layer which may be the insulation or fill. This consists of a monolithic poured in place insulation built up in one operation to the required thickness, and has the top side screeded to an even plane. This insulation shall be light in weight and poured to a thickness commensurate to the insulation value required. The insulation shall be properly protected from the weather while drying out.

When the insulation has set and is thoroughly dry, the surface is waterproofed with a Johns-Manville Asbestos and Asphalt Built-up Roof of standard design.

To Prevent Infiltration of Moisture

During the foregoing application, care is exercised at all points, particularly at eaves, walls, ridges, and connections to present construction, to see that the insulation is satisfactorily sealed to prevent the infiltration of moisture.

The above construction in place, exclusive of steel and insula-

* Delivered at meeting of the Technical Association of the Pulp and Paper Industry of Chemical Exposition, New York, week of September 28, 1925.

tion, will weigh approximately 8 pounds per square foot. The insulation adds a little more to the weight, but, of course, this varies with the thickness. Insulation can be furnished that will weigh approximately 2 pounds per square foot per inch of thickness.

Several test roofs of this character have been installed in different localities and under different conditions. The behavior has been carefully noted under climatic changes and varying interior conditions. I am glad to say that no sign of deterioration in any respect is evident up to the present time.

Condensation on the underside of the roof may be divided into two classes, viz.: that which clings in bead formation to the underside, and that which, in the form of vapor, seeps through the joints or openings (particularly in wood construction) and condenses inside a hidden part of the roof construction. The latter is probably the more troublesome, as its ravages can continue unnoticed, both rotting out material and gradually raising heat loss.

The roof in time may be weakened to the extent that it could endanger the lives of any workmen who may find it necessary to venture on the roof.

Falling Chips Cause Annoyance

Due to the fact that the rot starts at the top and works down, the true condition may not be evident until the disintegration has reached the underside in spots. About this time small flakes or chips start to fall on the run of paper and cause annoyance.

When this condition occurs, it generally means reroof. The waterproof covering, while probably in good condition, must necessarily be destroyed. This reroofing proposition means both money outlay and temporary curtailment of production.

Reinforced fire-resisting slabs are probably not used to as large an extent as wooden construction. Much criticism can be found with these, due to their weight, porosity, and tendency to crack, thus allowing corrosion of reinforcement and subsequent failure in time. In general, this type does not possess the insulating value of heavy wood decking.

Upon analyzing the roof construction described, you will note that the slab does not depend on a reinforcement for its strength, but rather on the non-reinforced centering.

The slab is built up of time tested rot-proof, non-absorbent materials that are highly water and vapor resisting from both sides. The layers in their construction are so bound together and sealed that chances of a condensation film forming at any point are eliminated. Also there are no through fasteners or other connections from one surface to the other that might permit of heat loss.

The whole deck, being made up of non-inflammable materials throughout, is fire-resisting.

Little Maintenance Required

Since the construction is rot-proof, fire-resisting, and waterproof, it is evident that little or no maintenance will be required. The slab will not require paint or other coatings.

It is not claimed that this roof construction will entirely eliminate condensation, but, if properly insulated, the condensation can be very greatly reduced. With a proper roof, a saving may also be noted in the heating requirements.

It is possible to vary the construction of this roof to meet varying plant conditions.

Patents have been applied for covering the various phases of this construction.

* * *

The author will be glad to go into this roof construction more deeply with any one interested, or complete data and specifications may be secured from Johns-Manville, Inc.

Current Paper Trade Literature

Abstracts of Articles and Notes of Papermaking Inventions Compiled by the Committee on Abstracts of Literature of the Technical Association of the Paper Making Industry

CLARENCE J. WEST, CHAIRMAN

Sulphite Process

Magnesium Sulphite Liquor for Cellulose. Aktiesel. Thunes Mek. Verksted und E. F. Heyerdahl. Nor. pat. 40,516, Dec. 8, 1924. Minerals containing calcium and magnesium are burned and dry-slaked and treated with gaseous sulphur dioxide and then with aqueous sulphur dioxide at such a temperature that the resulting liquor will contain mainly magnesium compounds.—C. J. W.

Behavior of Calcium and Magnesium Bisulphite Liquors on Heating Under Pressure. H. Wenzl. Wochbl. Papierfabr. 56, 256-259 (Feb. 28, 1925). The results of Schwalbe and Berndt (see next abstract) on the behavior of calcium and magnesium bisulphite liquors on heating under pressure are interpreted from a physicochemical standpoint. The action of magnesium chloride in lessening the precipitation of calcium sulphite in calcium bisulphite liquor is attributed to the formation of hydrogen ions by hydrolysis of the chloride.—E. Schmidt. Wochbl. Papierfabr. 46, 485-488 (Apr. 18, 1925). Polemic with Wenzl.—J. L. P.

Oxidation of Magnesium and Calcium Bisulphite Liquors and Their Behavior on Heating Under Pressure. C. G. Schwalbe and K. Berndt. Papierfabr. 23, 1-6 (Jan. 4, 1925). Detailed descriptions of several experiments on the ease of oxidation of magnesium and calcium bisulphite liquors and their behavior on heating under pressure are given. In the air oxidation of bisulphite liquors there is a steady decrease, from the surface to the interior of the liquid, of the SO_3 content, since the sulphate molecules produced at the surface diffuse only very slowly into the inner layers. Since also the surface exposed in the storage tank is relatively small as compared with the total volume of the solution, the oxidation of magnesium bisulphite liquor is in practice approximately equal to that of calcium bisulphite liquor, which upon standing becomes covered with a crust of calcium sulphate. On heating magnesium bisulphite liquor under pressure there is no separation of the solid sulphite as is the case with the calcium salt. This is due to the fact that magnesium has a stronger affinity for the acid and also to the greater solubility of the normal sulphite, if formed. On mixing the bisulphites in equimolecular mixtures, the precipitation of calcium sulphite occurs to a less extent and begins at a higher temperature than with pure calcium bisulphite. The normal sulphite does not separate as readily in solutions of calcium bisulphite containing magnesium chloride, owing to a metathesis. If the liquor contains magnesium chloride in an amount equivalent to the calcium, the quantity of sulphite which precipitates is greater than with the equimolecular mixed liquors. The temperature, at which separation begins, lies between that of pure calcium bisulphite and that of the mixed liquors.—J. L. P.

Decker Sulphite Process. A. Klein. Zellstoff U. Papier 4, 17-18 (Feb., 1924). A brief discussion of the merits of the Decker process for manufacturing sulphite pulp. Tables showing the heat balance for the process are given.—J. L. P.

New Spray Tube. E. Belani. Papierfabr. 23, 150-151 (Mar. 1, 1925). The construction of a new spray tube is pictured and described.—J. L. P.

Analysis of Sulphur Gases. E. Schmidt. Papierfabr. 23, 229-

232 (Apr. 5, 1925). A critical review of the Reich-Lunge, Sander, and Dieckmann methods for the analysis of sulphur gases from pyrite or sulphur burners is made. All are subject to errors. The Reich-Lunge method yields more accurate results when methyl orange is employed as an indicator and when carbon dioxide-free water is used. The Franck procedure [Papier Ztg., p. 1766 (1887)] is free from these difficulties. The gases are passed through an iodine solution and then through sodium hydroxide liquor, so that the sulphur dioxide content can be ascertained from the iodide consumption and the sulphite content calculated from the alkali used. The method is independent of indicators, air in the gases, and gives correct results. It is more rapid, as shown by parallel experiments.—J. L. P.

Analysis and Control in the Sulphite Pulp Mill. R. Sieber. Papierfabr. 23, 209-215 (Mar. 29, 1925). The Lunge and Stierlin titrimetic method of determining sulphur in pyrites yields too high values and is unsuitable as a control method. The proposed modification dissolves the reaction product in water, as usual, and then concentrated hydrochloric acid, hydroxylamine hydrochloride and ammonium chloride are added, whereby the ferric salts are reduced to the ferrous state. The sulphuric acid is determined in the customary manner in the colorless solution. In the analysis of gases from the sulphur burners, it is recommended that the temperature be taken and all measurements reduced to standard conditions. Asbestos simore suitable than glass wool as an absorbent in the determination of sulphurous acid by the Richter method. The following procedures are briefly discussed: iodine titration method for total sulphur dioxide, the Sander mercury chloride method, Oeman method, and method for determining free acid and combined sulphite.—J. L. P.

Preheating of Cooking Acid by Waste Gases. Anon. Zellstoff U. Papier 5, 123-125 (Apr., 1925). The solubility data of Ecknell and of Sims and Oeman on sulphur dioxide in water and solutions of calcium bisulphite, sulphuric acid, and sodium sulphate are reproduced. The economy of using gases to preheat cooking acid is briefly discussed.—J. L. P.

Liquid Sulphur Dioxide Process for Sulphite Pulp. III. Character of Pulp Obtained from Extracted Longleaf Pine Chips. R. H. McKee and D. E. Cable. Paper Trade J. 80, No. 17, 41-46 (Apr. 23, 1925). Longleaf pine sapwood extracted below 45° C. with liquid sulphur dioxide gives a pulp, when cooked by the customary sulphite process (with calcium as base) which compares favorably with spruce with respect to yield and color of unbleached pulp. The heartwood is practically impossible to pulp with calcium as the sole base; but using ammonia or soda instead of calcium, as the base, gives a lower yield of fair pulp darker in color than pulps similarly obtained from the sapwood. Unextracted heartwood can be pulped using ammonia as the base, the yield of pulp (on dry, resin-free wood) being nearly equal to that from extracted chips; but the color is not as good and the bleach consumption higher than for the extracted chips. Mixed heartwood and sapwood, cooked with sodium bisulphite liquor, gave 44% of pulp, which required 16% of bleach to give a slightly creamy white product.—A. P.-C.

Alfthan-Serlachius Process. Papier 28, 335-338 (Mar. 1925). The process consists essentially in cooking in a sulphite liquor containing sodium bisulphite, calcium bisulphite and free sulphur dioxide, at a pressure of 5 to 6 atmospheres and a maximum temperature of 130° to 150° C. The merits of the process are discussed and the results it gives are compared with those obtained by the usual process.—A. P.-C.

Some Sulphite Mill Calculations. IV. Measuring Fluid-Flow With Orifice, Venturi or Pitot. W. B. Van Arsdel. Paper Trade J. 80, No. 19, 55-57 (May 8, 1925). Graphs of various formulas are given to facilitate calculations.—A. P.-C.

Heat Relations in the Sulphite Cooking Process. Rudolf Sieber. Wochbl. Papierfabr. 56, 69-71 (Jan. 17); 159-161 (Feb. 7); 192-195 (Feb. 14); 217-219 (Feb. 21); 297-301 (Mar. 7); 417-421 (Apr. 4); 453-456 (Apr. 11, 1925). A series of articles on the subject. Digester radiation losses are considered in detail and diagrams are shown. The heat losses due to escaping gases are discussed and the variation with the moisture content of the wood and the size of the digester are described. The fourth article deals with the calculation of the heat consumption from the heat units in the steam. The last three articles consider heat consumption by the cooking process under different conditions. Numerous diagrams are used.—J. L. P.

Cooking of Sulphite Pulp. G. P. Genberg. Papierfabr. 23, 179-181 (Mar. 15, 1925). A translation from Paper Trade J. 78, 160-168 (1924).—J. L. P.

Recent Investigations in the Chemistry of the Sulphite Process. A. Klein. Zellstoff U. Papier 5, 1-9 (Jan.); 121-123 (Apr., 1925). Essentially a critical review of the recent articles on the chemistry of the sulphite process by Haegglund and Bjorkman [Svensk Kemisk Tid., June and Nov. (1924)], and of Miller and Swanson.—J. L. P.

Mitscherlich Test in Cooking Sulphite Pulp. G. Petterson. Svensk Pap.-Tid., Sept. 30, 1924; Pulp & Paper 23, 291-295 (Mar. 19, 1925). The precipitate obtained in the Mitscherlich test consists of calcium monosulphite ($CaSO_3$), which is less soluble in ammonia than the other lime salts (lignosulphonate, sulphate, acetate and other organic salts) present in the liquor; so that the amount of precipitate obtained toward the end of the cook depends primarily on the inorganic SO_2 content of the sample of liquor. The sample being drawn off very hot, all the free SO_2 is driven out by the time the test is made, and only such SO_2 is retained in the liquor as is combined in some manner, probably as calcium sisulphite; so that the test is an indirect measure of the inorganically combined lime remaining in the liquor. If the sample is drawn off through a condenser, the SO_2 content will be much higher, and consequently the precipitate will also be higher and will no longer be a measure of the residual lime. The test is based essentially on the fact that a sample of liquor drawn off from the digester without a condenser is degasified in a characteristic manner: the greater the proportion of acid formed in the liquor during digestion, the greater the quantity of SO_2 removed from combination with the lime; and as the velocity of cooking increases and the degree of degasification increases, the smaller the ammonia precipitate. Titration of the SO_2 in the precipitate by means of iodine would be more accurate and satisfactory than estimation of the volume of the precipitate as carried out at present.—A. P. C.

Sulphite Pulp Prepared from Different Parts of the Spruce Tree. E. Hagglund. Pap. Och Travarntid. For Finland, No. 2 (1925); Zell. U. Papier 5, 81-83 (Mar.); Papierfabr. 23, 279-284 (Apr. 26). Samples of moist and air dry wood from different parts of a 60 yr. old spruce tree are treated with sulphite cooking acids of different composition, and the resulting pulps investigated with regard to quality, yield, ash, and lignin, and the sugar content of the waste liquors. Pulp giving the maximum tearing length was prepared with a cooking acid containing 3.9% free sulphur dioxide and 1.1% calcium oxide. Diminution of the lime content yields a greater decrease in the strength of the paper, and an increase in the sulphur dioxide content behaves similarly. In general, strength tests were practically independent of the moisture in the wood. The pulp yield from air dry wood was 1 to 1.5% less than from moist wood. The pulp from the latter contains more lignin and is more difficult to bleach. This may be attributed to a decrease in the reaction velocity of the cooking process on account of the moisture. Wood from the lower part of the trunk gave a 1% higher pulp yield than that from the upper part of the tree, but the resulting paper sheets have equal strengths. Wood from the branches of the tree gave a 10% lower pulp yield, and the paper gave lower strength tests. The folding endurance was about 1/10 of the paper produced from the trunk of the tree. The wood from tree branches is decomposed with greater rapidity by the sulphite process; if the cook is stopped at the proper time the pulp yield

is about 50%. The sugar yields from the waste liquors were about the same although slightly higher from the air dry wood.—J. L. P.

Resin Difficulties in the Manufacture of Paper. J. Encknell. Pap.-Och. Travarutid. for Finland, No. 20 (Oct. 31, 1924); Papierfabr. 23, 13-16 (Jan. 11, 1925). The source and elimination of pitch troubles in the manufacture of paper from sulphite pulp are discussed. By blowing the digester under pressure the pitch or resins are more readily removed by washing, especially with hot water. By passing the stock through a separator with vigorous mechanical treatment or by adding petroleum or hydrochloric acid, the resins are made less harmful in subsequent operations. These harmful substances may be treated in a colloid-chemical way and be made less troublesome, by (1) addition of a protective colloid, (2) absorption of the resin suspension, and (3) fixation of the suspension on the fiber. These methods are considered in detail. (Also in Zellstoff U. Papier 5, 20-22, Jan., 1925.)—J. L. P.

Reddening of Sulphite Pulp. E. Oman. Svensk Pap. Tid. Nos. 21 and 22 (1924); Papierfabr. 23, 57-61 (Feb. 1, 1925). In investigations on the reddening of sulphite pulp, no attempt has been made to correlate the age, storage period, and climatic origin of the wood, from which the pulp was made, with this phenomenon. Investigations are reported on the action of sulphurous acid on reddened pulp and in the presence of sodium hydroxide, sodium chloride, calcium hydroxide and calcium chloride. Sulphurous acid, containing 0.16% SO_2, effected a superior whiteness in 10 min.; the same acid, containing 0.032% SO_2, yielded a white pulp in 1 hr. This compound yielded better results by itself than mixed with the above substances.—J. L. P.

Process for the Recovery of Gases Evolved on Heating Cooking Liquor in the Production of Sulphite Pulp. E. Laaser. Ger. pat. 407,962. Papierfabr. 23, 71 (Feb. 1, 1925). The evolved gases are passed through a compressor and forced into the digester again at the bottom.—J. L. P.

Process for the Recovery of Excess Sulphur Dioxide and Heat from Waste Gases from Pulp Digesters. Zellstoffabrik Waldhof and Hans Clemm. Ger. pat. 404,325. Papierfabr. 23, 47 (Mar. 1, 1925). The hot gases in the steam space of a pulp digester are removed by a compressor and passed into a tank of fresh cooking acid.—J. L. P.

Sulphite Waste Liquor

Distillation of Sulphite Liquor. H. O. V. Bergstroem. Swed. pat. 57,476, Oct. 1, 1924. Sulphite liquor is distilled in a column still under reduced pressure and heated by means of hot waste water, for instance, condenser water, obtained in the manufacturing process.—C. J. W.

Production and Storage of Strong and Hot Sulphite Liquor. J. Strindlund. Nor. pat. 40,922, Feb. 9, 1925. Mechanical features regarding the arrangement of a system of containers for storing and enriching hot, used liquor.—C. J. W.

Evaluating Sulphite Cellulose Waste Lye. E. L. Rinman. Swed. pat. 57,863, Nov. 26, 1924. The waste lye, after distillation of alcohol, is evaporated and the residue is mixed with gypsum and materials containing aluminium oxide, ferric oxide and silica in amounts suitable to form a raw material for cement. When the mixture is burned the sulphur escapes as sulphur dioxide and a cement clinker is formed.—C. J. W.

Removing the Lye from the Fibers by Washing Within the Digester. K. L. E. Thunholm. Swed. pat. 57,153, Aug. 20, 1924. With particular aim at the sulphite cellulose production, water is applied in the digester evenly and slowly, successively replacing the lye. The temperature difference oetween the lye and the applied water should be as small as possible.—C. J. W.

Evaluation and Regeneration of Magnesium Sulphite Waste Liquors. Aktiesel. Thunes mek. Verksted. Nor. pat. 40,517, Dec. 8, 1924. The waste liquor is evaporated and burned, the expelled sulphur dioxide and the magnesium oxide in the ashes are used for the production of fresh liquor or for other purposes.—C. J. W.

Tanning Material from Waste Sulphite Liquor. Badische Anilin und Soda Fabrik. Ger. pat. 406,110, Zell. U. Papier 5, 60 (Feb., 1925). A tanning material is manufactured from purified and concentrated wood extract (such as waste sulphite liquor), sodium hydroxide, and an aromatic hydroxy compound containing no sulpho group. 1050 parts of the concentrated waste liquor are warmed with 70 parts of phenol, or a cresol, and 252 cc. sodium hydroxide solution (40% strength) for 10 hr. in a bath of sodium chloride solution. The resulting solution, which has the least solid residue, is acidified after cooling to only a weak congo red paper reaction. This liquid, after proper dilution, is suitable for tanning purposes.—J. L. P.

Waste Gases and Waste Liquors. H. Frankenbach. Wochbl. Papierfabr. 56, 261-263 (Feb. 28, 1925). The economy of utilizing waste gases and liquors in the manufacture of pulp is discussed.—J. L. P.

Device for Introducing Sulphite Waste Liquor Into Furnaces. E. Wirth-Frey. U. S. pat. 1,518,723, Dec. 9, 1924. An injecting member is located inside the furnace for directing the liquid in the form of a single jet, and is supported in such a manner as to be movable.—A. P.-C.

Highly-Active Absorption Carbon from Sulphite Waste Liquor. E. Schmidt assignor to Gesell. fuer Chemische Produktion. U. S. pat. 1,527,083, Feb. 17, 1925. An absorbent, combustible, unrotted cellulose-containing substance is impregnated with sulphite waste liquor and carbonized under temperature conditions such as to form highly active adsorption carbon.—A. P.-C.

Use of Waste Sulphite Liquor in Manufacture of Inks. Paul Seidler. Ger. pat. 400,976. Zellstoff U. Papier 5, 137 (Apr., 1925). Waste sulphite liquor is used as a thickening material in the manufacture of inks. It replaces gum arabic, dextrin, sugar etc.—J. L. P.

Alkaline Processes

Process for Disintegration & Bleaching and Refining of Plant Fibers and Production of Pure White Pulp for Paper and Textile Industries. A. Koch. Ger. pat. 407,334. Papierfabr. 23, 100 (Feb. 15, 1925). Raw plant fibers, wood, etc., are treated in the cold with sodium hydroxide, in dilute solution, and by introducing a continuous stream of chlorine gas. The mixture is stirred and periodically caustic soda, or soda ash, is added. The incrustations and impurities are completely removed.—J. L. P.

Refining Process for Lignified Plant Fibers, Hemp in Particular. H. Mark and A. von Wacek. Ger pat. 409,041. Papierfabr. 23, 184 (Mar. 15, 1925). Hemp fibers, and the like, are first digested with a 0.5% solution of an alkali carbonate under pressure and then treated with a very dilute alkaline solution, which is boiled in an open container.—J. L. P.

Soda Pulp—Kraft Paper. W. Herzberg. Papierfabr. 23, 254-255 (Apr. 12, 1925); Wochbl. Papierfabr. 56, 390-391 (Mar. 28). Several kraft paper bags, employed for packing cement, were found to contain 15 to 95% sulphite pulp; the breaking length varied from 3425 to 5700 m.; the folding endurance from 138 to 4310; and the weight per sq. m. 72 to 82 g. Only 4 of the samples submitted (folding endurance over 1400) can be correctly termed kraft paper.—J. L. P.

Use of Preliminary Impregnation in Cooking Wood by the Alkaline Processes. S. D. Wells, J. A. Staidl, R. Grabow. Paper Trade J. 80, No. 11, 55-57 (Mar. 12, 1925). The results of a mill scale trial carried out Oct. 16, 1922, indicate: the amount of active chemical required for cooking may be reduced by as much as 16%; the yield of pulp obtained may be increased 4.6%; the steam required in cooking may be reduced materially; the steam required in evaporating the black liquor may be reduced more than 20% and the capacity of the evaporator considerably increased; the time required for the cooking cycle is not increased, the time required for impregnation being saved by shortening the digestion period. More intelligent management of the digester room would be required than is now necessary, but the result would be very material savings along with an improvement in quality of the pulp.—A. P.-C.

Waste Liquors and Gases of the Paper Industry

Survey of the Recent Domestic and Foreign Patent Literature on the Utilization of Waste Liquors and Waste Gases of the Pulp Industry, 1912-1924

By A. Schrohe[1]

Translated, with additions, by Clarence J. West, Chairman Committee on Abstracts and Bibliography, T. A. P. P. I. (Contribution No. 47 of the Committee).

(During the translation of the following article by A. Schrohe, frequent reference was made to the indexes of Chemical Abstracts; the fact that many patents were found which were not included by Schrohe led the translator to make a thorough search of the pages of this journal, which were later supplemented by the use of the compilation by Johnson and Hovey and the patent index of E. C. Worden. The original compilation contained 202 patents; the completed manuscript, 534 patents. It is believed that the compilation in its finished form presents a fairly comprehensive survey of the patent literature as relates to the utilization of waste gases and liquors in the pulp industry. Because Schrohe used a chronological arrangement for his presentation, this was followed in the second part. In order to render the information contained herein more available, a patent index (by countries), an author index and a subject index were prepared.)

The great technical and economical importance of the waste of the pulp industry was emphasized by Dr. Heuser in 1923 at the summer meeting of the Vereins der Zellstoff- und Papier-Chemiker und Ingenieure in Dresden in the following words:

"Modern industry may no longer recognize waste in any form. Everything, no matter how uninviting it may appear, must be considered as a valuable product The possibility of economically modifying the method of manufacture, either by returning the waste to the cycle of manufacture or by the production therefrom of new products of value to related or even foreign manufacturing operations, must be recognized as one of its chief problems. Oftentimes, by this line of procedure, the previously principal product may assume the role of a by-product and the despised by-product may become the most valuable."

Dr. Schwalbe expressed a similar thought in the spring of 1924: "An industry can be considered as thoroughly organized only when it completely utilizes all of its raw material and consumes all its wastes."

A survey of the methods of utilizing waste sulphite liquors has been presented by Max Müller in his "Die Literatur der Sulfitablauge," published in 1911 as vol. 4 of the "Schriften des Vereins der Zellstoff- und Papier-Chemiker," and by B. Johnsen and R. W. Hovey in their "Utilization of waste sulphite liquor," which appeared as Bulletin No. 66 of the Forestry Branch, Dept. of Interior, Canada.

A similar survey, including patents, on the utilization of alkaline waste liquors is found in Chr. Christiansen's book on soda pulp (Natronzellstoff), published in 1913, and covering the period 1889 to 1911.

In Paper, 1923, No. 10, p. 7-10, G. K. Spence has stated his views concerning the treatment and utilization of alkaline waste liquors in North America. In this we find that in 1914, A. H. White attempted the distillation of the waste liquors, with and without the addition of lime, for the recovery of acetone, methyl alcohol and ammonia. Vertical, horizontal and rotary retorts were used. Starting from this basis, Drewsen found that, by the addition of lime, the yield of acetone, which was such a desirable product during the war, could be increased. Three factories were erected in the United States at the cost of millions of dollars for carrying out this process but only one of them actually was in operation and that for a short time only. At the close of the war, all three plants were abandoned, since the cost of the production of acetone by the process was such that it could not compete with the other processes. Drewsen has taken out a number of patents in the United States, but it is believed that the principal part of his method was already covered by a patent issued to H. M. Baker, of Rochester, N. Y., in 1866.

E. Eisenbeiss states in the Festund Auslandsheft of the Papierfabrikant for 1924, p. 101, that with a yearly world production of pulp of about 5,000,000 tons, the dry residue which could be recovered from the waste liquor is not less than 3,000,000 tons; most of this waste liquor is at present being discharged into rivers. If utilized as a fuel, this would result in a saving of some 2,000,000 tons of coal per year. It must be noted, of course, that this material would not be suitable fuel for all industries.

The above facts and considerations make it appear desirable to assemble the more recent patents on this subject. The following compilation covers the period from 1912 to 1924, inclusive. The arrangement is based upon the time of publication of the patent and therefore does not give data regarding the priority of the patent. The compilation is based primarily upon the German patents (designated D. R. P.). Foreign patents are listed only in so far as they are considerably different or give supplementary material, for only the actual contents of the patents are given in the following abstracts.

1. 1912. D. R. P. 244,816. E. L. Rinman, Skutskär, Sweden. Method for the recovery of acetic acid and fosmic acid from the liquors of the soda pulp mills, which have been freed from humus and soda as bicarbonate.

The liquors are treated with an acid which is stronger than carbonic acid, *e. g.*, oxalic, hydrochloric or phosphoric, after which the acetic and formic acids are distilled off.

2. 1912. D. R. P. 244,941. E. L. Rinman. Method for obtaining sodium salts in the form of bicarbonate from black liquor of soda pulp mills, which has been freed from organic substances precipitated by carbon dioxide.

The liquors are heated and treated with ammonia and carbon dioxide.

3. 1912. D. R. P. 246,708. I. H. Wallin, Foss Bjästa, Sweden. Method for the preparation of alcohol from waste sulphite liquors.

The liquor is neutralized and aerated and, without further treatment, fermented.

4. 1912. D. R. P. 248,055. Chemische Industrie-und Handelsgesellschaft m. b. H., Dresden. Method of tanning.

Glycerine is added to a mixture of waste sulphite liquor and soluble chrome compounds; this enables the liquors to be concentrated to the desired extent while still maintaining them in the liquid state.

5. 1912. D. R. P. 250,275. British 13,586 (June 10, 1912). Austrian 72,451 (1916). Kurt Albert and Ludwig Berend, Amöneburg in Biebrich. Method for the production of completely emulsifiable masses from asphalt, tars, pitches, resins, oils, hydrocarbons, cresols, and other substances or mixtures insoluble or difficultly soluble in water.

The method consists in the use of a concentrated, neutral or slightly alkaline back water from cellulose manufacture as the emulsifying agent.

6. 1912. U. S. 1,043,303. Canadian 146,190 (1913). W. H. Dickerson, Muskegon, Mich. Treating waste sulphite liquor for tanning.

[1] Papierfabrikant 23, 30-33, 63-65, 89-92, 158-161, 251-253, 284-287, 293-296, 306-307 (1925).

The liquor, concentrated to 25° Be., is treated with 25 per cent of its weight of sodium chloride, upon which it gelatinizes, but, after standing 24-28 hours, it again becomes liquid and assumes a light color. It is then suitable for the preparation of a light colored leather.

7. 1912. U. S. 1,047,198. B. E. Gamble, Bowmansdale, Pa. Artificial fuel.

Powdered coal is first impregnated and coated with waste sulphite liquor neutralized with alkali, and then dried and heated. During the heating an impervious adhesive, *e. g.*, pitch or the like, is added.

8. 1912. Swiss 52,854. Gewerkschaft Pionier, Walsum a Rh. Briquetting by means of waste sulphite liquors.

The waste liquor is treated with a suitable agent, *e. g.*, acid or aldehyde, to coagulate the organic compounds contained in it; the briquets are then heated to 100-200° C. (Compare British 20,952, Sept. 13, 1912; Chemical Abstracts 8, 900.)

9. 1913. D. R. P. 255,853. W. Günther, Kassel. Method for the separation of lime from the sulphite lyes serving for the briquetting of ores, metallurgical products or fuels with the aid of sulphates.

The sulphates of those metals are used which form the principal part of the material to be briquetted or reduced.

10. 1913. D. R. P. 257,124. R. Adam, Berlin-Wilmersdorf. Method for regenerating the cooking liquors of the soda process.

The humus-like materials (incrustations) contained in the liquor are precipitated, under pressure and heating, and with continuous or intermittent stirring, with mixtures of such metallic oxides or their compounds, especially of the alkaline earth and iron groups, as form with water more or less difficultly soluble hydroxides or which can be decomposed by water into the corresponding mixtures of hydroxides.

11. 1913. D. R. P. 257,304. British 9,541 (Apr. 22, 1912). J. Millar Neil, New York. Method for regenerating the waste liquor from paper mills.

The black liquor is treated with carbon dioxide; then the mass is treated, with vigorous stirring, with the alkali compound of an acid-forming metal (*e. g.*, sodium aluminate or zincate) to precipitate the organic constituents. The precipitate is filtered off and the mother liquor is treated with oxygen, ozone or the like and then with lime. Evaporation is avoided by this process.

12. 1913. D. R. P. 262,468. R. von Walther, Dresden. Method for obtaining sulphur of waste sulphite liquors.

Treatment of the liquor with sufficient sulphuric acid to decompose the sulphurous acid and its compounds present therein, precipitates high yields of sulphur, partly in colloidal condition.

13. 1913. D. R. P. 262,473. Max Müller, Finkenwalde at Stettin. Method of converting calcium cyanamide by means of waste sulphite liquor into a non-dusting, slightly caustic fertilizer.

Calcium cyanamide is mixed intimately with pulverized residues obtained by the evaporation of waste sulphite liquors of about 12 per cent water content.

14. 1913. D. R. P. 265,689. Albert Stutzer, Königsberg. Method for preparing a fertilizer from waste sulphite liquor.

Turf, peat and similar materials are mixed with the waste liquor, the mixture dried and finally heated to about 120° C.

15. 1913. D. R. P. 266,096. U. S. 1,149,420 (1915). Swedish 34,941 (1912). Norwegian 24,140 (1912). Canadian 151,445 (1913). R. W. Strehlenert, Nol, Sweden. Method for the recovery of organic and inorganic constituents of waste sulphite liquors.

The sulphuric acid resulting by the oxidation of the sulphurous acid of the waste liquor at high pressures and temperatures by air or oxygen, decomposes the salts of the lignosulphonic acid, upon which the lignin substances precipitate as a light brown powder. (*Cf.* D. R. P. 310,819 (1919).)

16. 1913. D. R. P. 266,112. R. Blochmann, Königsberg. Method of rendering harmless the waste liquors of the sulphite mill.

The hot cooking liquors containing sulphurous acid are allowed to stand in contact with metals (*e. g.*, iron or zinc) for a long time and then mixed with the necessary amount of base to neutralize the free acid; the sulphurous acid is reduced to hydrogen sulphide, which reacts with the iron to form ferrous sulphide.

17. 1913. U. S. 1,054,141. D. R. P. 286,210 (1911). British 19,600 (1912). French 447,578. Max Platsch, Frankfurt a. M. Purifying waste sulphite liquors.

The liquor is first concentrated until all the volatile acids are driven off, *e. g.*, to about 35° Bé. By the addition of free sulphuric acid or a soluble salt (*e. g.*, aluminium sulphate), the ash content of the liquor is decreased to about 6 per cent, of which only about 20 per cent consists of potassium oxide. (*Cf.* C. A. 7, 1415.)

18. 1913. U. S. 1,062,016. Nils A. Langlet, Gotenberg, Sweden. Method of precipitating humin substances from black liquor.

This method proposes the electrolytic precipitation of the humin substances of the black liquor, in a form capable of being filtered. In order to make the black liquor sufficiently concentrated, there are added 10 to 20 per cent of crystalline sodium sulphate. It is then heated to above 65° C. and is electrolyzed in a diaphragm cell. The concentrated black liquor is contained in the anode space; the cathode space contains regenerated liquor or a solution of sodium chloride. In place of sodium sulphate, sodium carbonate or sodium hydroxide solution may be used. After removing the precipitate and causticizing and after the addition of the cathode solution, the purified black liquor is suitable for use as a cooking acid.

19. 1913. U. S. 1,075,916. H. H. Hurt, Covington, Vt. Tanning and mordanting agents from waste sulphite liquors.

The hot concentrated liquor is treated with aluminium, chromium or iron sulphates; the resulting precipitate can be dried without injury and serves as a tanning or mordanting agent.

20. 1913. U. S. 1,076,078. D. R. P. 291,854. Norwegian 26,445. C. B. Thorne, Hawkesbury, Canada. Apparatus for recovery of vapors from sulphate pulp digesters.

The gases and vapors evolved from the digesters during the heating pass through a condenser, in which the acid vapors are condensed; this condensate, mixed with water, is pumped into the top of the lime tower for the preparation of calcium sulphite. The gases which are not condensed are passed under the lime tower. An arrangement very similar to the above is described in U. S. Patent 1,263,486 (1918); the essential difference consists in the arrangement of the three acid-forming tanks, which are connected together, step-wise, after the manner of the arrangement of Woulff flasks. These are used for the recovery of the unabsorbed acid gases from the acid tower; they are sucked through the tanks in the opposite direction to which the absorbing liquid is flowing.

21. 1913. U. S. 1,103,216. H. K. Moore and R. B. Wolf, Berlin, N. H. Recovery methods for the sulphite process.

The closed blow pit is connected with a surface condenser, whose cooling surface is cooled with water only slightly below the boiling point (of the water), so that there are condensed only the vapors of methyl alcohol, acetone, benzaldehyde, acetic acid, etc., in addition to some of the water vapor; while the free sulphur dioxide passes through and is sucked through sodium or potassium hydroxide, which binds the sulphur dioxide. The condensate is collected separately The apparatus is also suitable for the soda and sulphate processes. [*Cf.* C. A. 8, 3119. See also U. S. patent 1,110,434, Sept. 15, 1913. C. A. 8, 3720.]

22. 1913. British 5,810. A. G. Bloxam, Southampton. Briquetting agents.

The waste sulphite liquor, freed from the greater part of the calcium by the addition of an excess of sulphuric acid, is suitable as a binder for coal. During the drying of the briquet at 100° C., the sulphuric acid disappears as sulphurous acid, with the precipitation of the water-soluble organic constituents of the waste sulphite liquors, which act as the binding agent.

23. 1913. Austrian 57,729. Max Hönig, Brünn. Manufacture of a tanning extract from waste sulphite liquor.

The liquor is treated with sufficient acid (sulphuric acid, oxalic acid), which forms an insoluble salt with calcium, so that all the lignin sulfonic acids and the volatile acids are liberated and all the calcium combined with these acids is precipitated. [*Cf.* German Patent 281,453, Feb. 24, 1912. C. A. 9, 2325.]

24. 1913. Austrian 60,041. W. H. Philippi, Offenbach. Manufacture of a tanning extract.

The extract prepared from purified waste sulphite liquor and chromium salts, suitable for the tanning and dyeing, as well as the finishing of textiles, is characterized by the addition of chrome hydroxide. [*Cf.* German Patent 254,866, Aug. 13, 1910. C. A. 7, 1307.]

25. 1913. Austrian 60,672-60,673. Actiebolaget Ethyl, Falun, Sweden. Method for preparing alcohol from waste sulphite liquors.

The waste liquor is treated with an ammonium salt (ammonium sulphate) in addition to a neutralizing agent, in order to render harmless the sulphurous acid bound to the organic substances. Further, the liquor previously treated as above, is also treated with an oxygen carrier (*e. g.*, manganese sulphate).

26. 1914. D. R. P. 271,479. B. Grätz, Berlin. Briquetting of coal with waste sulphite liquors.

Gelatinous aluminium hydroxide is added (to the coal, the waste liquor or the mixture of coal and liquor before briquetting). [*Cf.* C. A. 8, 2478.]

27. 1914. D. R. P. 275,214. M. Platsch, Pirna. Method of preparing water insoluble briquets with waste sulphite liquor, which has been freed of calcium compounds by means of a slight excess of sulphuric acid.

The briquets are dried at about 100° C. without vacuum. [See also U. S. 1,084,479 (C. A. 8, 1006); French 455,099 (Mar. 5, 1913) (C. A. 8, 568).]

28. 1914. D. R. P. 275,832. A. Richter, Stettin. Preparation of briquettes by the use of waste sulphite liquor previously treated with sulphuric acid.

Oils rich in carbon, such as tar oils, are added to the sulphite liquor and the briquettes are heated to 250-270° C. [*Cf.* C. A. 9, 522.]

29. 1914. D. R. P. 278,492. L. Kern, Hamburg. Method of preparing a fertilizer from waste sulphite liquor.

The waste liquor is mixed with certain impure kieselguhrs (*e. g.*, those from Algeria, Bohemia and Virginia), containing mineral and organic substances. [*Cf.* Papier-Ztg. 40, 194-196, 335 (1915); C. A. 9, 1086, 1362.]

30. 1914. D. R. P. 280,330. U. S. 1,087,911. Anna Grothe, Jersey City. Method for preparing a tanning agent from waste sulphite liquor.

After the free sulphurous acid is removed from the liquor, it is heated under pressure with cyanogen compounds, such as cyanides, sulphocyanides, cyanamide compounds, etc.; the liquid is filtered from the precipitate and precipitated with acids. The resulting precipitate is dried at the lowest possible temperature. The aqueous solution precipitates gelatin, glue, pancreatin, etc., and is absorbed by animal skins.

31. 1914. D. R. P. 280,455. B. Grätz, Berlin. Preparation of coal briquettes by means of waste sulphite liquors.

Fine coal is mixed with powdered blast-furnace slag, plaster of Paris, cement or like material capable of combining with water and holding it in combination at a temperature up to 110° C.; the mass is mixed with about 14 per cent of waste sulphite liquor containing 50 per cent of water, heated and formed into briquettes which are then heated to carbonize the sulphite liquors

32. 1915. D. R. P. 283,995. Chemische Fabriken Dr. K. Albert and Dr. L. Berend, Amöneburg. Fuel from solidified mineral and similar oils.

The solidification results from the formation of an emulsion of the oil with waste sulphite liquor.

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33. 1915. D. R. P. 285,752. Swedish 42,108. E. L. Rinman, Stockholm, Sweden. Method for treating waste sulphite liquors with alkali.

Sulphite waste liquors are heated with alkalies, particularly with calcium hydroxide, preferably under pressure, until they are transformed into a precipitate of lignin and calcium sulphite and a solution of an organic calcium salt. The latter may be subjected to dry distillation with strong bases, particularly calcium hydroxide, with or without the use of superheated steam. [This yields acetone, methyl alcohol, ethyl alcohol, ammonia and other nitrogen compounds, and an oily mixture of higher alcohols, aldehydes, ketones and hydrocarbons.] (*Cf.* Addition patent 298,734 (1917), 313,007 (1919); also D. R. P. 313,607 (1919); U. S. 1,202,317.)

34. 1915. D. R. P. 285,976. Willi Schacht, Weissenfels a. d. S. Method for removing the odor from the waste volatile vapors and waste gases of sulphate mills by washing with water.

The exhaust gases, cooled or not, are brought into contact with water, in the same or counter current, in pumps, centrifuges, disintegrators, beating engines, or the like. [In addition to the resulting condensation of the water vapor present and separation of sulphur, a chemical decomposition of organic compounds is effected, whereby the unpleasant odor is removed from the gases without the production of a back water having an unpleasant odor.]

35. 1915. D. R. P. 286,210. Max Platsch, Frankfurt a. M. Method of preparing waste sulphite liquor as briquetting agents by removal of lime with a slight excess of sulphuric acid.

The premature decomposition of the liquor may be prevented by adding sulphuric acid in the cold with stirring and special cooling of the liquor.

36. 1915. D. R. P. 286,601. H. Achenbach, Nussdorf bei Ueberlingrn, Baden. Process and apparatus for the recovery of sulphurous acid present in the waste sulphite liquor. (Also Norwegian 23,689 (1913)).

When the pressure of the discharged liquors is too low, to effect the required atomizing, this is reinforced, and the resulting vapor mixture immediately after its formation is thrown down by cooling and at the same time drawn off, whereby the removal of the gas is facilitated and other advantages are obtained.

37. 1915. D. R. P. 287,015. A. Jabs, Zürich. Process of drying and making weather-resistant masses, such as briquettes, which are bound by means of water-soluble agents, such as waste sulphite liquors.

The material is subjected to the action of waste gases, from gas engines, furnaces, etc., or other gases containing carbon dioxide at a temperature below 120° C., until sufficiently weatherproof and dry, a suitable temperature being obtained by mixing the used gas with fresh, hot combustion gases.

38. 1915. D. R. P. 287,092. Firma Fr. Küttner, Pirna. Method of purifying soda liquors which are contaminated with colloidal substances in solution.

The liquor is dialyzed.

39. 1915. D. R. P. 289,601. H. Kelsea Moore, Berlin. Method and apparatus for the recovery of the mineral constituents of the waste liquors from pulp mills and other residues. (Also U. S. 1,137,780, May 4, 1915.)

The waste liquor is mixed with sodium sulphate and the mixture sprayed into the upper part of a retort over a hot flame which evaporates the waste from the liquor. The residuum collects on a sloping floor of the retort and is burned with air under pressure.

(*To Be Continued*)

Waste Paper Rates to Hartsville to be Revised

The National Association of Waste Material Dealers announces that the Southern Freight Association proposes a revision of rates on waste paper to Hartsville, S. C., so that the rates will not be lower than those prescribed in the Georgia-Alabama Scale less 10 per cent. This will increase the rates from Atlanta, Ga., from 21½c to 26c, and from Macon from 21½c to 25½c.

Section of the

COST ASSOCIATION OF THE PAPER INDUSTRY

Affiliated with

THE AMERICAN PAPER AND PULP ASSOCIATION

Conducted by THOS. J. BURKE, C.A., Sec-Treas

The Preparation and Control of a Budget

By J. R. Tobey, Eaton, Crane & Pike Co., Pittsfield, Mass.

The word "budget" originated from the Gallic word meaning "sack," Latinized as "bulga," leather wallet or bag, from which the English word was derived. The name applied to an account of the ways and means by which the income and expenditure for a definite period were to be balanced. The term first came into use in England about 1760. Since that time its use has expanded until now the term is applied even to the individual household budget.

Principal Advantages of a Budget

The principal advantages of a budget are:

1—Information as to what the expenses of the different branches of an industry should be in order to produce a profit of a certain amount on the invested capital. If a concern does not operate under a budget system, it is trusting to luck when approving expenditures in different departments. If it prepares operating statements two or four times a year, it may find that these statements show a loss instead of a gain. By the use of a budget a certain amount of expense is approved, for each department, so that an operating statement prepared on the budget figures will show the desired profit.

2—The reduction of expenses. In order to prepare a budget it is necessary to study each item of expense charged to each account—say, for the last one or two fiscal periods. In large concerns which have thousands of entries, it is impossible for any one executive to approve of all of these expenses. As a consequence, these expenses are approved by several executives, and this may result in duplication of unnecessary expense. If each one of these accounts is broken up, it is surprising to see the amount of expense which may be eliminated as unnecessary.

3—The setting up of standards. When a budget is prepared, it determines the task which has to be met; first, by the executive in charge of the expense; second, by the foreman in direct charge of the work; and third, by the worker. Give an individual a task and show him that you are taking an interest in the result, and you will be surprised at what he can accomplish. If a concern could get everyone in its employ—workers, foremen, and executives—to think and co-operate, there is nothing that they could not accomplish.

4—The education of the foreman. The ordinary foreman knows little about the amount of labor, repairs to machinery, power, heat and light, and sundry expense which he is spending in his department each month; and unless he is furnished with reports showing these expenses, he is seldom held responsible for the keeping of these expenses down to a minimum.

If he has a budget for indirect labor and he has helped to prepare that budget, he soon requests an analysis of his labor expense if he exceeds his budget amount in any one month, and he gradually begins to think how he can reduce that item of expense so as to make a good showing. Just as soon as he begins to think that he can save on one item of expense, he will try to find ways of saving on all items of expense concerning his department—such as, the turning out of lights at night before leaving the factory, thus reducing the power, heat, and light charge. He will also save on his repairs charge.

5—The uneven sales demand can be kept out of production schedules. If the sales budget has been properly determined, the factory will know how much to produce of a certain article each week or month in order to meet the demand. The proper scheduling of production so that there will be an even flow of work in the factory at all times is one of the biggest economies that can be made. If a factory does not have a sales budget and if it does not know how many of each article it will need to produce each month to meet the orders, the flow of production will be jerky. By this I mean that when a great many orders are in process the factory is working overtime and hiring all the help that can be obtained. Then, in a couple of months, it begins to lay off help; the orders have stopped coming in. If you could see this plotted, your operations would be full of peaks and valleys instead of being an even line.

The expensive part of this method of operating is the hiring of new help, i.e., the labor turnover. There are still a great many executives who do not realize the cost of a labor turnover. When there is a demand for labor, it is difficult to get. A premium is paid and you receive unskilled labor. The training of this unskilled labor is very expensive. A great deal of waste results and the production is slow. Just think what a saving can be made if you give an operator constant employment throughout the year! The operator becomes efficient and contented with an average wage, and this results in large profits for the company.

I hope that I have not devoted too much time to the scheduling of work, which is a big subject in itself; but if a concern can schedule its work so as to have an even flow of production, it results in economy in a great many ways.

6—The improvement and simplifying of processes and the standardizing of equipment. If a factory knows in advance how much it will be called upon to produce each month to meet the sales requirements, it is in a position to know just how much machinery it is necessary to have to meet these requirements. If it does not know this until the orders are actually received, there will be a

time during the year when it will need not only all the help that can be got, but all the machines. This means that there will be a great deal of idle machinery during certain times of the year. This results in the tying up of money and excessive repairs and maintenance charges as well as depreciation and it requires a much larger factory to operate on this basis.

As an instance of what may be done, it was found that after budgeting our sales requirements our box making machinery was idle about fifty per cent of the time and that if we manufactured on schedule one-half of these machines could be eliminated.

7—A minimum inventory. If raw materials and finished goods are budgeted, a minimum amount can be carried, thereby increasing the turnover and reducing the amount of money tied up.

It is also possible to save a great deal in the purchasing of raw materials, because if it is known that a certain quantity is needed each month throughout the year, contracts can be placed for the entire amount with deliveries each month. This usually results in an increase of profits.

8—The possibility of the anticipated profit being wiped out by an unusual expenditure is prevented.

9—A knowledge of the income and expenses, monthly, so that sufficient cash will be on hand to pay expenses and it will not be necessary to borrow.

10—The setting of a task for each employee in the organization.

11—The co-ordination of sales and production with the financial resources.

12—A centralized executive control over the internal operations of the business.

Popular Conception of a Budget

Until recent years budget control has been considered primarily in connection with governmental units. There has been much discussion of the city, state and national budgets. The next step was the adoption of the budget by large industrial concerns.

I think it has been the general opinion that, because of the "red tape" involved, a budget is not suitable for a small concern. In reading many of the articles written, it may appear that there is a great deal of so-called red tape; but please remember that in a large concern it requires a certain amount of clerical detail to control a budget. The idea that a budget is only for a large concern is all wrong. It is just as necessary that a small concern have a budget, and it can be controlled to advantage in a very simple way. You will find that insurance companies and banks are advocating budgets for individuals. If a budget is the proper thing for an individual or for a household, then it certainly should be used by every concern, whether large or small.

Appointing the Budget Controller

In starting the budget the first step is to appoint a person to be budget controller, this person to have absolute control of the budget system. Around this controller should revolve all budget activities. It is customary and logical that he be some member of the cost or financial departments.

I would like to emphasize at this time that if a concern maintains a complete budget of all its accounts, the opportunity that the cost accountant has of analyzing and controlling these accounts is worth more to him in his accounting work and gives him more prestige with his concern than any other part of his duties.

Duties of Budget Controller

The duties of the budget controller are as follows:

1—To notify the executives responsible for the expenses of the different branches of the firm on November 15 to prepare their budgets for the coming year.

2—To furnish department heads with data necessary for the drawing up of the budget. Such data usually consist of reports of past performance, or it may be information as to the estimated amount of business for the coming year.

3—To receive from department heads their estimates and to forward these with recommendations to the budget committee, if there is a budget committee, or to the president of the company for approval.

4—To supply the president or the officer of the company who decides on the amount of the budget with a comprehensive statement of all budget items in comparison with expenses of the previous or past years. This statement should be prepared in the form of a balance sheet and a profit and loss statement showing the estimated profit based on the budget figures.

5—To receive from the president the approved budget and to notify department heads.

6—To prepare for department heads monthly reports showing actual expenses as compared with the budget.

Length of Budget Period

One important question which should be considered before installing a budget system is the length of the budget period. This period may be three, six or twelve months, depending on the nature of the concern. Sometimes certain expenses can be budgeted for a longer period than other expenses. I think that most expenses can be budgeted for a year, but with such items as sales it may be more practical in some concerns to budget these for three or six months. Certain raw materials are more standard than others and it may be more practical to budget these materials for three or six months; but most expenses should be budgeted for one year.

Organization Chart

Now that we have appointed a person as budget controller, the next step is for him to look over his concern and see who are responsible for the expenses and accounts to be budgeted; that is, we first need an organization chart. In most large concerns this chart will show an officer of the company in charge of sales, another perhaps in charge of manufacturing, another in charge of stock, shipping and distribution, and still another in charge of administration. Under each of these different executives will be superintendents or managers, and under the managers, foremen, workmen, and so on throughout the organization.

In preparing this organization chart or in reviewing the present chart—if there is one—it may be necessary to suggest certain changes. For example, an expense should not be controlled by two persons as it will result in very poor control. Each will blame the other if the budget is exceeded. If the organization chart is a good one, there will be a distinct line of control. The officer in charge of manufacturing will have all expenses coming under the manufacturing of the goods, but will not have any part of the selling; nor will the officer in charge of selling have charge of part of the manufacturing.

Review of Accounting System

If the accounting system is not in good order and the different expenses are more or less confused throughout the accounting scheme, it will be difficult to control the budget without a great deal of clerical detail. It is desirable to have the accounts arranged under the classifications shown in the operating statement.

1—Net Sales. 2—Manufacturing Cost of Goods Sold. 3—Stock and Shipping Expense. 4—Selling Expense. 5—Administrative Expense.

If each of these divisions is controlled by an officer of the company, so that there is no overlapping of responsibility between accounts, it is very much easier for the budget controller to control the budget and prepare his statements.

First Step In Setting Up a Budget

The first step in setting up a budget is for the president or board of directors to determine the desired percentage of profit which should be made on the invested capital. This is the first problem to be solved on paper. In analyzing this problem one must consider market conditions, cost of production, cost of sales including distribution, advertising, etc., because it is easy to say that a certain per cent is desired when perhaps conditions will not war-

rant the earning of that amount. At another time, under different conditions, perhaps a larger percentage could be earned.

How to Prepare a Budget

In preparing a budget for a particular expense, it is necessary to carry out a great deal of detail; first, so that the officer of the company who reviews all the budgets can see the different items of expense; and second, so that the department head when called upon to explain why his expenses exceeded his budget in certain months will have the details of the budget to compare with the actual expenses.

Take, for example, a labor budget for one of the offices. The executive in charge of that branch of the concern informs the office manager to prepare his budget. In preparing it, he lists the names of each employee and the yearly amount of their salaries, also any increases or eliminations effective during the year. This gives the office manager a chance to look over the coming year's work in detail. It is his opportunity of thinking out improvements or ways of bettering the efficiency of his department. If there are any economies such as the combining of jobs or the elimination of certain work or any increase in the expenses due to additional work, they should be estimated and reported in detail.

Take an expense such as subscriptions to trade organizations, which will amount to a considerable sum if not carefully controlled. If an expense of this kind is itemized, there may be several subscriptions which can be eliminated because they have already served their usefulness during the year. As I said before, one of the principal advantages of a budget is the analyzing of expenses so that each item comes to the attention of some responsible person.

Budgeting Sales

Before those responsible for the expenses of a concern can prepare their budget for the new year, they must know how much business it is estimated will be done. Hence, the sales manager must first prepare the sales budget. If statistics are kept, as they are in most well organized concerns, these figures will show the sales for each district; the district sales will be further divided, showing the sales by different lines or kinds of product; and then these will be divided by salesmen.

The sales manager prepares, with the help of each district manager, a budget by districts. A great many things need to be considered in preparing this budget; such as, general business conditions, the possibility of expansion in new territories, competition by other concerns, the introduction of new lines of product, advertising program, salesmen's contests, etc.

It is customary in preparing sales budgets to establish quotas for each salesman for each line. Then the salesman has his budget and knows just how much is expected of him. If he does not sell his quota in a certain line, he has to explain to the district manager his reasons for failing to do so.

The sales budget must be carefully prepared because a great many other expenses—in fact, most of the expenses—are based on the amount of sales expected. The purchasing department plans to purchase a certain amount of materials to meet the sales demand. The factory prepares its manufacturing program to manufacture these goods, and most everything hinges on the correct budgeting of the sales.

It is very difficult to prepare a good sales budget without furnishing the sales department with a great deal of information. It is necessary for the sales department to have at least the following information:

1—Any changes in the policy of the company, such as the establishment of branch offices throughout the country, changes in prices, advertising campaigns, and development of new goods.

2—Information concerning general trade or market conditions. This information may be obtained through outside agencies or through industrial research carried on by the firm.

3—Reports showing sales for past periods.

Responsibility of Foreman

Before we take up the budget for the factory, I would like to say a word about the responsibility of the foreman. In order to make a budget successful, we must have the co-operation of each individual. It is particularly important that the foreman be taken into the confidence of those higher up and be made to feel the responsibility for the administration of his department. If this responsibility is given to a foreman and he is made to feel that he is a part of the management, he will take such an interest in his work and show such results, that the company will reap the reward of such confidence many times.

It was not until we started to budget that we thought much about our foreman's being an executive for his part of the business. We first started by getting him interested in his cost of production and then we showed him how he could reduce this by the elimination of unnecessary indirect labor. Next we gave him control of repairs to machinery and sundry supplies, until now he controls almost every item of expense within his department.

At one meeting of our Foremen's Association, we explained how a department with a large floor space was charged more than a smaller department for such expenses as repairs to buildings, taxes, depreciation, janitor service, and other expenses distributed on a floor area basis. The very next day one or two departments reduced the space that they were using in order that they might reduce their expenses. Before this had been explained to them they could not be convinced that they did not need all the room they were using.

At the time we made the foreman responsible for the repairs to machinery and other repairs in his department, we started something that was very interesting. At first the charges were made from the repair tickets directly to the different departments without being approved by the foreman. This did not work out well at all because when a department exceeded its repair budget, the foreman said after receiving an analysis that he did not receive that amount of time in repairing his machinery. It finally came to a point where we had to arrange to send to each foreman a daily report of his repair charges. This brought out some very interesting things and we found that repair men were very careless in making out their tickets. It also resulted in the foreman seeing that a repair man left his department when he had completed a repair job, and he usually made a note of the elapsed time in order to check his analysis.

It is only natural that a foreman should try to make a good showing and do better than other foremen. It was our experience that suggestions from them made appreciable savings in direct operations and in the methods of our present operations as to moving and other expenses.

Manufacturing Expense Controllable by Foreman

The following expenses with a few exceptions can be controlled by the foreman:

1—Labor Direct and Indirect. 2—Supplies and Sundry Expense. 3—Repairs to Machinery. 4—Power, Heat, and Light. 5—Taxes, Depreciation, and Insurance.

Index Figures in Manufacturing Departments

The budgeting of direct and indirect labor in manufacturing departments is a difficult matter to control in any industry which has a varied product. To control these expenses we determined a standard cost or index figures for each department, based on a standard period. We determined this standard cost for all forms of product in each department; that is, if a department produced two or three different kinds of boxes, a standard cost was determined for each kind of box. Each week the production is figured at the standard cost and this determines the standard payroll. The actual payroll is then divided by the standard payroll which gives us, after moving the decimal point two places to the right, a figure which is over or under 100. If it is over 100, the department is doing better than the standard; and if it is under, the actual payroll is greater than the standard.

In each department a chart is posted and the curve shows the trend of the efficiency in that department. This chart is in plain view and the foreman takes great pride in keeping his standard as much above 100 as possible.

This index figure, as we call it, has a tendency to eliminate unnecessary overtime. I know of a plant where overtime was so general and so sought after that the foreman was frequently taken to task by the workers who felt that they were not getting their share of the overtime. In this same plant workers were allowed to stay out days and work overtime nights. This was during the war or right after it when overtime received a higher rate of pay than the regular time, but it showed the lack of control and responsibility for this expense. The budget system will generally stop this kind of graft.

Budgeting Sundry Expense and Supplies

Our experience was that before sundry supplies and miscellaneous departmental expenses were budgeted, it was very noticeable that foremen requisitioned large quantities of supplies, possibly several months' supply at one time. After the foreman controlled his own budget, he was very careful to get only enough supplies for his immediate needs and he was also careful in giving these out. Large supplies may deteriorate in the shop or be stolen. When no particular attention is paid by the company to such supplies, employees get careless and think nothing of taking some of them home, or they may be dissipated throughout the plant by borrowing. Thus, the foreman who requisitions them out of stores may actually use only a small part for his purposes.

It is a hard task to go to a department foreman and tell him that he uses so few of a certain printed form that it does not pay to print it; but if this expense is budgeted and you can show him just what it costs to print this form, he begins to think that perhaps it would be cheaper for him either to use something else or get along without it.

Material Budget

After we have determined the labor budget and a schedule for each manufacturing department, it is necessary that we next turn to the material budget. In budgeting sales we determined the estimated amount of each article to be sold. Taking this same basis we determine the amount of material necessary to produce this number of articles. With these two things in mind—the estimated sales of each article and the schedule of labor in each department to produce it—we determine our schedule of material to supply the factory so that it can keep pace with the sales schedule.

Now that we have determined the amount of different kinds of material needed each week and after considering the inventory on hand, we can prepare a schedule for the purchasing department so that it can purchase with regular deliveries every period a certain amount of material. The purchasing agent must keep in touch with the market at all times to make possible any revision of the material budget.

Selling Expense Budget

On account of the limited time, it is possible for me to say only a few words about the different expense budgets of a concern. There are two main classes of selling expense:

1—The expense of securing the order.

2—The expense of storing the goods after they are manufactured, the shipping, packing, and delivery to the customer.

The first group may be subdivided into: A—The expense of sales. B—Salesmen's salaries and commissions. C—Traveling expense. D—Maintenance of branch selling offices. E—Advertising.

Some of the expenses in the second group are: A—Storage. B—Packing and shipping. C—Freight, cartage, and express.

All of these expenses need to be broken down in preparing the budget.

The Advertising Budget

For a good many years many firms have set aside a certain amount for advertising. This advertising budget may be determined in the following ways:

1—By basing it on a preceding period and increasing or decreasing this amount as conditions warrant.

2—By determining a certain percentage of the estimated sales.

3—By allowing a certain amount of each product sold.

Plant and Equipment

Up to this time we have considered the budgeting of our manufacturing activities. Now we shall consider the additions to plant and equipment for two purposes; first, so that the factory will have the necessary equipment to carry out its production program; and second, so that the financial executive will have funds in his budget to buy the equipment.

It is necessary to know the estimated equipment at the end of each month in order to prepare an estimated balance sheet. To obtain this figure we must know the value of equipment at the beginning, the amount of depreciation to be written off, the value of new equipment purchased, and the value received from equipment disposed of. From these figures we can arrive at the value of equipment at the end of the period.

The preparation of this budget is usually done by department heads and by the engineering department. It is reviewed and adjusted by the budget controller and chief executive. To control this budget a certain few persons, such as superintendents and other responsible persons, should have the authority to sign requisitions on the purchasing department in amounts up to say, fifty dollars. Requisitions for the purchasing of equipment amounting to more than fifty dollars should be signed by an officer of the company.

Cash

Just as with plant and equipment, it is necessary for the financial executive to know the cash on hand at the beginning of the period and the receipts and disbursements during the period in order to estimate the amount on hand at the end of the period. This amount will be used in the estimated balance sheet. He must know the amount of cash received from customers' accounts, from notes and accounts receivable, and from all other sources. The same thing applies to disbursements.

Reports should be made to the treasurer showing these items in detail. If in a certain month there is not sufficient cash, perhaps on account of the accumulation of inventory in certain months, the treasurer may have to borrow from the bank.

If these budget estimates are presented to the bank, it is much easier to obtain a loan than if a concern waits until there is an actual cash shortage.

Control of Budget

The determination of a budget for each item of expense or income is only part of a complete budget system. One of the most important parts is the control of the budget. It will do no good to say that five thousand dollars will be spent for this or that expense if the expenditure is not controlled. The control is through the cost and accounting departments. It is necessary that a concern have a good accounting classification so that the general books will have all expenses of a certain kind together. If the selling expenses are confused with the manufacturing expenses, it is difficult to determine the whole selling expense without a great deal of detailed analysis.

The five main divisions referred to in the first part of this paper must not be confused. These divisions are:

1—Net Sales. 2—Manufacturing Cost of Goods Sold. 3—Stock and Shipping Expense. 4—Selling Expense. 5—Administrative Expense.

Under the manufacturing expenses should be an account for each department, and these departmental accounts should be further divided between labor, power, heat and light, repairs to machinery, tools and fixtures, sundry expense, etc.

The accounting department should prepare for the cost department a trial balance in detail as soon after the first of the month as possible. It is necessary that the budget reports be prepared as soon as possible after the books have been closed. Otherwise the information is presented to the persons responsible for the

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different items of expense after it is so old that it is hard for these department heads to remember the details.

A complete report should be sent to each executive responsible for his share of the budget. For example, the Vice-President in charge of selling should receive a complete report of all sales and selling expenses; the Vice-President in charge of manufacturing should receive reports for all manufacturing activities; and reports should also be sent to foremen and department heads who are directly in charge of the different activities under these officers. These reports should show: first, the estimated budget for the month as compared with the actual figures; second, the estimated budget to date as compared with the actual figures to date.

The president of the company should receive a monthly report of all budget expenses, but these should be summarized as he need not be bothered with the details unless some particular item is unusual; that is, unless it does not compare favorably with the budget estimate. He should receive a monthly profit and loss statement and balance sheet showing the actual figures as compared with the budget estimates.

Summary

In conclusion I would like briefly to summarize the benefits which seem to me to be realizable from the operations of a business under the budget system:

1—It insures planning ahead in all departments of the business on a basis probably insuring a reasonable chance to secure the desired profit.

2—Centralized control is secured over all divisions of the business.

3—It emphasizes the need of good organization.

4—Sales and production plans are co-ordinated with financial resources.

5—Definite plans and goals are set up.

6—It will show the importance of keeping an uneven sales demand out of the production schedule. This reduces the labor turnover by having constant employment throughout the year. The result is reduced cost and more contentment on the part of the employees.

7—Operating efficiency will be increased: A—By the definite assignment of responsibility for expenditures. B—By the use of wage payments based on the results of time study. C—By the efforts to improve, alter and standardize machinery and processes. D—By the maintenance of a steady flow of production in all departments.

8—The inventory of raw and completed materials can be kept to a minimum, allowing more of a turnover, and the work in process can be reduced.

9—Costs and statistics can be used for purposes of control rather than for historical information.

10—The possibility of anticipated profits being wiped out by over-expenditures is prevented.

11—The financial department is better able to provide the necessary cash for wages and purchased material.

12—Economies are realized because an opportunity is given to study expenses before they are actually incurred.

13—The budget serves as a measuring stick to compare the standards and promises with actual performance.

14—Executives have a great deal more time to consider important matters and to plan for improvements.

Brown Paper Co. To Rebuild Mill.

ITHACA, N. Y., September 21, 1925.—Although no definite plans have yet been made, the Brown Paper Company mill, which was completely destroyed by fire about two weeks ago, will probably be replaced by a modern up-to-date building, Albert G. Brown of 401 Lake street, owner of the mill, announced last week.

Mr. Brown plans to replace the old mill with a new paper manufacturing plant. Nothing will be done about it until next spring, Mr. Brown added.

Obituary

William D. Hollis

[FROM OUR REGULAR CORRESPONDENT]

CHICAGO, September 21, 1925.—William D. Hollis, a pioneer Chicago merchant, president of the Hollis & Duncan Paper Company, died last week at his home, 542 Forest Avenue, Evanston. He was born in 1850 and came to Chicago about 1865. For a time he sold newspapers. The firm of Hollis & Duncan was organized in 1879. Mr. Hollis was an outstanding figure in the paper business in Chicago. His wife died last March. Surviving are six children: Mrs. Helen M. Schuyler, Mrs. Mae H. Bahr, Mrs. Ava H. Burrow, Chalmers M., Howard B., and Raymond D. Hollis. Funeral services will be held today. Burial will be in Graceland cemetery.

Herbert A. Smith

SPRINGFIELD, Mass., September 21, 1925.—Herbert A. Smith, connected with the Powers Paper Company, of Springfield, for over 25 years died last week in his home, 84 Allyn Street. He was born in Willimansett, on January 4, 1878, and had always lived in this locality. He leaves his wife and a daughter, Marjorie, at home. There are two sisters: Mrs. Frederic Burkhardt and Mrs. F. W. Kidder. Mr. Smith was prominent in Masonic circles being a member of Nonotuck Lodge, Mt. Holyoke Chapter Royal Arch Masons, St. Andrew's Commandery, Knights Templar and Mehla Temple of Shriners. He also belonged to the Oxford Golf Club, of Chicopee and the Holyoke Canoe Club.

Report of Meeting of German Paper Chemists

The Society of Cellulose and Paper Chemists and Engineers held its principal 1924 meeting on March 4 and 5, 1925, in Berlin. Many members were present. The stenographic report is now printed in book form (Otto Elsner, Publisher, Berlin S. 42, Price 5 Marks). The book comprises 256 pages and contains the stenographic minutes of the daily discussions and the proceedings of the meeting; by numerous pictures it also illustrates the lectures and discussions which took place at this meeting. Among others will be found: Prof. Dr. Wislicenus: Concerning the colloid chemistry of the development and decomposition of vegetable frame cellulose, lignin and wood fibre; Dr. Rudolf Lorenz: New researches in the line of paper sizing; Prof. Eberle: Influence of the increase in steam pressure on the steam plants of the cellulose industry; Rudolf Eichmann: Operating bookkeeping and calculation of costs in the paper industry. Moreover, the numerous reports and lectures of the special committees and analysis committees are contained in the book. Finally the by-laws of the society and a list of its members will be found. In the judgment of experts, the work reflects, as it were, the present status of the special science, thanks to the abundance of instructive and variegated treatises it contains.

Engine Breaks at Hawthorne Paper Mill

[FROM OUR REGULAR CORRESPONDENT]

KALAMAZOO, Mich., September 21, 1925.—Damage at the plant of the Hawthorne Paper Company, caused Thursday week when the line shaft and one of the drivers of a small engine gave way, has been cleaned up, according to reports from the general offices. They are still awaiting the arrival of the necessary parts with which to repair the damaged engine. As soon as these arrive it will be possible to operate the mill at full capacity.

The break caused damage of between $5,000 and $10,000 valuation, parts of the broken machine being hurled against the walls and through windows, while certain parts of the power unit were torn loose from their fastenings. Fortunately no one was in the room at the time and the accident resulted without injury to a single individual.

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Wall paper .....11 bls., 20 cs.
Hangings .....19 bls.
Printing paper .....27 cs.
Wrapping .....10 cs.
Writing .....5 cs.
Flint paper .....13 cs.
Transfer paper .....8 cs.
Photo paper .....5 cs.
Fancy paper .....4 cs.
Colored paper .....4 cs.
Silk paper .....10 cs.
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Baryta coated paper .....50 cs.
Metal coated paper .....22 cs.
Gold coated paper .....3 cs.
Tissue paper .....3 cs.
Drawing paper .....10 cs.
Filter paper .....86 cs., 37 rolls
Straw board .....351 rolls
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COLORED PAPER

Phoenix Shipping Co., Pr. Harding, Bremen, 4 cs.

SILK PAPER

S. Gilbert, Veendam, Rotterdam, 5 cs.

S. Gilbert, Volendam, Rotterdam, 5 cs.

SURFACE COATED PAPER

P. Puttman, Zeeland, Antwerp, 2 cs.

Gevaert Co. of America, Zeeland, Antwerp, 38 cs.

F. Henjes, Jr., S. Ventana, Bremen, 76 cs.

Globe Shipping Co., S. entana, Bremen, 67 cs.

BARYTA COATED PAPER

Globe Shipping Co., S. Ventana, Bremen, 67 cs.

METAL COATED PAPER

Hensel Bruckman & Lorbacher, Cleveland, Hamburg, 22 cs.

GOLD COATED PAPER

C. B. Richard & Co., Columbus, Bremen, 3 cs.

TISSUE PAPER

F. C. Strype, Franconia, Liverpool, 3 cs.

DRAWING PAPER

E. Dietzgen & Co., Amer. Farmer, London, 6 cs.

H. Reeve Angel & Co., Inc., Amer. Farmer, London, 4 cs.

FILTER PAPER

H. Reeve Angel & Co., Inc., Amer. Farmer, London, 9 cs.

E. Fougera & Co., Roussillon, Bordeaux, 77 cs.

G. M. Graves Co., Inc., Volendam, Rotterdam, 37 rolls.

STRAW BOARD

A. Vuyck, Veendam, Rotterdam, 124 rolls.

A. Vuyck, Volendam, Rotterdam, 227 rolls.

NOTE PAPER AND ENVELOPES

Independent Forwarding Co., Franconia, Liverpool, 30 bls.

ENVELOPES

Globe Shipping Co., Columbus, Bremen, 64 cs.

SPOOLS OF PAPER

J. I. Bernitz, Volendam, Rotterdam, 41 cs.

MISCELLANEOUS PAPER

P. H. Petry & Co., Veendam, Rotterdam, 18 cs.

International Forwarding Co., Veendam, Rotterdam, 4 cs.

Japan Paper Co., C. Rosso, Genoa, 122 cs.

W. Hartman, Ohio, Hamburg, 8 cs.

P. H. Petry & Co., Cleveland, Hamburg, 6 cs.

F. C. Strype, Cleveland, Hamburg, 26 cs.

C. Schleicher Scholl & Co., Cleveland, Hamburg, 6 cs.

Guibout freres, Paris, Havre, 7 cs.

A. Flinn & Co., Paris, Havre, 7 cs.

W. Hartman, Laura C., Trieste, 40 bls.

Titan Shipping Co., Aquitania, Southampton, 14 cs.

C. Steiner, Volendam, Rotterdam, 11 cs.

F. C. Strype, Volendam, Rotterdam, 5 cs.

Heemsoth Basse & Co., Volendam, Rotterdam, 13 pgs.

RAGS, BAGGINGS, ETC.

Chemical National Bank, Veendam, Rotterdam, 69 bls. rags.

Garfield National Bank, Veendam, Rotterdam, 21 bls. rags.

E. J. Keller Co., Inc., Veendam, Rotterdam, 14 bls. rags.

E. J. Keller Co., Inc., Veendam, Amsterdam, 52 bls. rags.

Flower Waste & Packing Co., Veendam, Rotterdam, 33 bls. rags.

Atlas Waste Manfg. Co., Veendam, Rotterdam, 21 bls. rags.

Darmstadt Scott & Courtney, Veendam, Rotterdam, 39 bls. bagging.

Irving Bank Columbia Trust Co., Natirar, Gefle, 245 bls. rags.

B. D. Kaplan, Franconia, Liverpool, 26 bls. rags.

The Stone Bros. Co., Inc., Franconia, Liverpool, 72 bls. rags.

Brown Bros. & Co., Franconia, Liverpool, 3 bls. rags.

Anglo South American Trust Co., Baltic, Liverpool, 14 bls. rags.

Anglo South American Trust Co., Lancastrian, Liverpool, 52 bls. rags.

Equitable Trust Co., Minnetonka, London, 50 bls. rags.

E. J. Keller Co., Inc., Cleveland, Hamburg, 207 bls. rags.

Ladenburg Thalman & Co., Cleveland, Hamburg, 9 bls. rags.

Ladenburg Thalman & Co., Cleveland, Hamburg, 31 bls. silk waste.

Irving Bank Columbia Trust Co., Cleveland, Hamburg, 97 bls. rags.

Brown Bros. & Co., Transylvania, Glasgow, 266 bls. rags.

A. W. Fenton, Inc., Transylvania, Glasgow, 200 bls. paper stock.

S. Birkenstein Sons, West Eldara, Antwerp, 27 bls. rags.

Chase National Bank, West Eldara, Antwerp, 25 bls. rags.

W. Schall & Co., West Eldara, Antwerp, 31 bls. bagging.

Brown Bros. & Co., West Eldara, Antwerp, 476 bls. rags.

Star Woolen Co., West Eldara, Antwerp, 45 bls. rags.

A. W. Fenton, Inc., Balsam, Cardiff, 362 bls. rags.

A. W. Fenton, Inc., Balsam, Cardiff, 106 bls. bagging.

Central National Bank of Cleveland, Nobles, Oran, 96 bls. rags.

A. W. Fenton, Inc., Nobles, Naples, 69 bls. rags.

Jaffe Products Co., Siboney, Havana, 6 bls. rags.

E. J. Keller Co., Inc., E. Luckenbach, Kobe, 400 bls. rags.

Castle & Overton, Inc., Stuttgart, Bremen, 125 bls. rags.

Chase National Bank, United States, Copenhagen, 1433 bls. bagging.

Castle & Overton, Inc., United States, Copenhagen, 166 bls. rags.

Castle & Overton, Inc., Incemore, Leith, 5 bls. paper stock.

Chemical National Bank, Keifuku Maru, Hamburg, 179 bls. rags.

Anglo South American Trust Co., Laura C., Venice, 140 bls. bagging.

Brown Bros. & Co., Laura C., Venice, 141 bls. rags.

A. W. Fenton, Inc., Laura C., Venice, 135 bls. rags.

A. W. Fenton, Inc., Laura C., Trieste, 76 bls. rags.

National Bank of Commerce, Laura C., Bari, 97 bls. rags.

National City Bank, Laura C., Naples, 79 bls. rags.

Mechanics & Metals National Bank, Laura C., Naples, 162 bls. rags.

I. Abela & Co., Laura C., Malta, 80 bls. shoddy.

New York Trust Co., S. Ventana, Bremen, 67 bls. rags.

Mechanics & Metals National Bank, S. Ventana, Bremen, 28 bls. paper stock.

New York Trust Co., S. Ventana, Bremen, 49 bls. bagging.

Anglo South American Trust Co., Hesperides, Buenos Aires, 89 bls. rags.

Mechanics & Metals National Bank, Volendam, Rotterdam, 298 bls. rags.

E. J. Keller Co., Inc., Volendam, Rotterdam, 42 bls. rags.

Philadelphia National Bank, Volendam, Rotterdam, 21 bls. rags.

OLD ROPE

Brown Bros. & Co., Veendam, Rotterdam, 133 coils.

W. von Doorn, Veendam, Rotterdam, 77 coils.

Brown Bros. & Co., Keifuku Maru, Hamburg, 24 coils.

New York Trust Co., S. Ventana, Bremen, 42 coils.

Brown Bros. & Co., Stavangerfjord, Oslo, 49 coils.

W. von Doorn, Volendam, Rotterdam, 137 coils.

CASEIN

M. E. Clarendon Sons, Hyacinthus, Buenos Aires, 417 bags.

M. H. Grace & Co., Vauban, Buenos Aires, 355 bags.

Atterbury Bros., Inc., Roussillon, Bordeaux, 233 bags.

T. M. Duche & Sons, Hesperides, Buenos Aires, 1584 bags.

WOOD PULP

M. Gottesman & Co., Inc., Veendam, Rotterdam, 600 bls. wood pulp.

Bulkley, Dunton & Co., Natirar, 7000 bls. wood pulp.

J. Anderson & Co., Natirar, Iggesund, 800 bls. sulphite, 100 tons.

J. Anderson & Co., Natirar, Hernosand, 2850 bls. sulphite, 475 tons.

Pagel Horton & Co., Inc., Natirar, Husum, 6000 bls. sulphite, 1000 tons.

Central Union Trust Co., United States, Oslo, 400 bls. wood pulp.

Castle & Overton, Inc., United States, Oslo, 500 bls. wood pulp.

National City Bank, Keifuku Maru, Hamburg, 700 bls. sulphite, 108 tons.

Castle & Overton, Inc., Columbus, Bremen, 270 bls. wood pulp.

The Borregaard Co., Inc., Stavangerfjord, Sarpsborg, 300 bls. sulphite.

E. M. Sergeant & Co., Stavangerfjord, Oslo, 160 bls. chemical pulp.

BALTIMORE IMPORTS

WEEK ENDING SEPTEMBER 26, 1925

Bulkley, Dunton & Co., Paliki, 11,525 bls. wood pulp.

Bulkley, Dunton & Co., Milos, 3850 bls. wood pulp.

H. F. Watson & Co., Balsam, Cardiff, 221 bls. rags.

Merchants National Bank, Nobles, Marseilles, 70 bls. rags.

NEW ORLEANS IMPORTS

WEEK ENDING SEPTEMBER 26, 1925

Castle & Overton, Inc., Effna, Germany, 500 bls. rags.

Castle & Overton, Inc., Bolivian, England, 86 bls. rags.

Castle & Overton, Inc., Leerdam, Rotterdam, 132 bls. rags.

PHILADELPHIA IMPORTS

WEEK ENDING SEPTEMBER 26, 1925

E. H. Bailey & Co., Incemore, Leith, 62 cs. paper.

S. S. Alcorn, West Eldara, Rotterdam, 4 bls. packing paper.

A. Vuyck, West Eldara, Rotterdam, 130 rolls straw board.

D. I. Murphy, West Eldara, Botterdam 744 bls. rags.

The Stone Bros. Co., Inc., West Eldara, Rotterdam, 51 bls. rags.

Fidelity International Trust Co., West Eldara, Rotterdam, 177 bls. rags.

Reis & Co., West Eldara, Rotterdam, 22 bls. thread waste.

Union National Bank, West Eldara, Rotterdam, 156 bls. rags.

G. M. Graves Co., Inc., West Eldara, Rotterdam, 174 bls. rags.

Castle & Overton, Inc., West Eldara, Rotterdam, 34 bls. rags.

S. Birkenstein Son, West Eldara, Antwerp, 240 bls. rags.

Market St. National Bank, West Eldara, Antwerp, 223 bls. rags.

National Bank of Commerce, West Eldara, Antwerp, 218 bls. rags.

Brown Bros. & Co., West Eldara, Antwerp, 69 bls. rags.

Chase National Bank, West Eldara, Antwerp, 329 bls. rags.

Philadelphia National Bank, West Eldara, Antwerp, 42 bls. rags.

Salomon Bros. & Co., West Eldara, Antwerp, 695 bls. rags.

Castle & Overton, Inc., West Eldara, Antwerp, 432 bls. rags.

A. W. Fenton, Inc., West Eldara, Antwerp, 80 bls. rags.

A. Hurst & Co., West Eldara, Antwerp, 70 bls. rags.

Ropex Corp., West Eldara, Antwerp, 49 bls. rags.

J. A. Steer & Co., West Eldara, Antwerp, 85 coils old rope.

Castle & Overton, Inc., Nobles, Leghorn, 461 bls. rags.

E. Butterworth & Co., Inc., Nobles, Leghorn, 34 bls. rags.

Philadelphia National Bank, Incemore, Belfast, 190 bls. rags.

J. A. Steer & Co., Incemore, Belfast, 166 bls. rags.

Castle & Overton, Inc., Hornfels, Bremen, 124 bls. rags.

Castle & Overton, Inc., West Arrow, Antwerp, 242 bls. rags.

Castle & Overton, Inc., Cape Town Maru, Hamburg, 215 bls. rags.

E. J. Keller Co., Inc., Breedyk, Amsterdam, 718 bls. rags.

E. J. Keller Co., Inc., Legie, Hamburg, 338 bls. rags.

BOSTON IMPORTS

WEEK ENDING SEPTEMBER 26, 1925

J. H. Scott Paper Co., Keifuku Maru, Hamburg, 100 rolls printing paper.

Maurice O'Meara Co., Keifuku Maru, Hamburg, 20 cs. paper.

E. J. Keller Co., Inc., Lorain, Hamburg, 127 bls. rags.

E. J. Keller Co., Inc., Keifuku Maru, Hamburg, 86 bls. rags.

A. W. Fenton, Inc., Keifuku Maru, Hamburg, 59 bls. rags.

Maurice O'Meara Co., Keifuku Maru, Hamburg, 17 bls. rags.

L. H. Abenheimer, Keifuku Maru, Hamburg, 130 bls. rags.

Brown Bros. & Co., Keifuku Maru, Hamburg, 167 bls. rags.

R. Blank, Keifuku Maru, Hamburg, 90 bls. rags.

A. W. Fenton, Inc., Keifuku Maru, Hamburg, 31 coils old rope.

Castle & Overton, Inc., Keifuku Maru, Hamburg, 560 bls. wood pulp, 112 tons.

E. M. Sergeant & Co., Inc., Natirar, Hernosand, 1800 bls. sulphite, 304 tons.

Brown Bros. & Co., Natirar, Gefle, 2500 bls. sulphate, 505 tons.

Pagel Horton & Co., Inc., Natirar, Gefle, 1250 bls. sulphate, 250 tons.

Pagel Horton & Co., Inc., Natirar, Gefle, 2500 bls. sulphite, 254 tons.

Bulkley, Dunton & Co., Natirar, 1500 bls. wood pulp.

Hartig Pulp Co., Natirar, Hudiksvals, 300 bls. sulphate, 60 tons.

Pagel Horton & Co., Inc., Natirar, Ornskoldsvik, 300 bls. sulphate, 50 tons.

Pagel Horton & Co., Inc., Natirar, Ornskoldsvik, 3000 bls. sulphite, 508 tons.

German Paper Men Visit Kalamazoo

KALAMAZOO, Mich., September 21, 1925.—Dr. J. W. Zanders and E. Klingm, officials of the J. W. Zanders Paper Mill, Bergisch-Gladback, Germany, were visitors in Kalamazoo during the past week. They visited numerous mills in this vicinity. They were at the Park-American during their stay.

New York Market Review

Office of THE PAPER TRADE JOURNAL,
Wednesday, September 30, 1925.

Conditions in the paper market are quite healthy at present and the steady growth of business since the beginning of September continues. Numerous inquiries are being received and the prevailing demand is very pleasing. Trading generally is reported to be better than in the corresponding period of last year and the activity experienced in the various grades is most encouraging. The sales organizations of the leading paper houses report good progress and are optimistic regarding the expansion of trade for the balance of the year and well into 1926.

The demand for news print has increased substantially and prices are consequently very firm. Stocks are believed to be below normal. In the metropolitan area, the newspapers are showing great vigor and big advertisers are taking a generous amount of space to make their announcements. There is little likelihood of any material slackening of the consumption of news print for some time.

Orders for box board are heavier and inquiries are more numerous than for some time. The fine paper market is expanding in a gratifying manner, the bulk of the business, however, consisting of innumerable small orders from the printers. Coarse paper also is in good demand and the volume of sales is steadily increasing.

Mechanical Pulp

An urgent demand for spot supplies is being experienced in the ground wood market, while a steady buying movement on contract is also taking place. Prices generally rule firm. Mechanical pulp is still moving freely into the consuming channels and the future outlook for the market is bright.

Chemical Pulp

Continued strength continues to be shown in the chemical pulp market and prices rule firm. Kraft and bleached sulphate are in particularly strong demand. Although present stocks are ample, the number of inquiries in the market leads many observers to believe that accumulations may soon be absorbed and many consumers are said to be purchasing at a considerable period ahead, in anticipation of a rise in prices.

Old Rope and Bagging

The demand for old rope and bagging has greatly improved and prices are somewhat firmer. The mill demand has been for the same grades as previously. In a few cases dealers are reported to have secured slightly higher prices.

Rags

The rag market is practically unchanged and the prices are generally holding to their former level. The foreign rag market is very quiet. Dealers on the other side are asking higher prices for export, due to heavier home consumption by the European mills. Imported rags have been in moderate demand and some increased liveliness is expected in the near future.

Waste

No marked change has taken place in the waste paper market, although a fair number of inquiries are being received from the mills. An increase in the volume of sales, however, is confidently predicted by many observers for the near future. Higher prices may be expected when the requirements of the mills broaden.

Twine

The twine market continues fairly active and the demand experienced during the last few weeks is well maintained. Prices are holding firm and the situation as a whole is much brighter than for some time.

Paper Mills Want Better Canal Service

[FROM OUR REGULAR CORRESPONDENT]

GLENS FALLS, N. Y., September 26, 1925.—The pulp and paper industry of the Upper Hudson Valley was largely represented at a hearing held in the City Hall here by the New York State Canal Survey Commission for the purpose of securing suggestions and information which will aid the State in bettering the canal service. It was brought out at the hearing that there was an imperative need on the part of the State to develop the canal system so that greater benefit can be had by the taxpayers, especially through the Glens Falls feeder and the Champlain Barge Canal. It was emphatically declared by one manufacturer that the need of competition in freight rates by water was imperative in this district as the railroad rates were bad. A packet system was advocated for the Barge Canal for the benefit of pulp and paper mills and other shippers.

Among the speakers at the hearing were Fred B. Chapman, of Finch, Pruyn & Co., of this city, and Mrs. John Thorpe, president of the Fort Miller Pulp and Paper Company, of Fort Miller. Pulp and paper concerns in Fort Edward and Hudson Falls were also represented.

Mrs. Thorpe, head of the Fort Miller Pulp and Paper Company, told the commission that she practically depended upon the Barge Canal for transportation in keeping her mill in operation and said that if she was deprived of the Barge Canal there is a possibility that her company would go out of business because of the prohibitory railroad freight rates.

Mrs. Thorpe stated that her plant produced 3500 tons of finished product annually and that a new ground wood pulp mill would bring the production to 5000 tons a year. She stated that one-third of this production was handled by canal and that all of the pulp wood as well as coal for her plant was received by boat.

It was declared that if transportation by water with large craft could be brought about it would result in a big advantage to shippers in this section, it being contended that the controlling factor of shipping by canal was the size of the craft.

To Protect Indian Paper Industry

[FROM OUR REGULAR CORRESPONDENT]

WASHINGTON, D. C., September 30, 1925.—The Legislative Assembly of British India has passed a Government resolution granting additional protection to the paper industry, which is expected to become a law under formal final approval by the Executive, according to a cable received by the Department of Commerce from Trade Commissioner Renshaw at Bombay.

The measure provides for the imposition of a protective import duty of one anna per pound on certain printing paper and all writing papers to continue until March 31, 1932.

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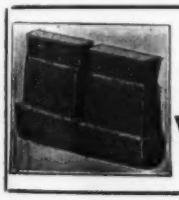

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Miscellaneous Markets

Office of THE PAPER TRADE JOURNAL,
Wednesday, September 30, 1925.

Trading in the chemical market continues to expand and the improvement experienced since the beginning of September shows every sign of continuing for an indefinite period of time. During the past week, the demand broadened, and a steadily increasing volume of inquiries was received. A satisfactory amount of business was transacted in practically all sections of the trade, with the result that prices were very firm. Spot buying was considerably better than in the preceding week and, while the heavy contract buying movement has not started, some contract buyers, at least, were in the market. Manufacturers of chemicals report that large shipments are being received, following the expansion of operations, and that contract withdrawals are being well maintained.

BLANC FIXE.—The demand for blanc fixe is good, and there has been considerable improvement in the tone of the market during the past few weeks. Judging by the greatly increased number of orders being received, the outlook for the future is particularly bright. The pulp is quoted at from $60 to $70 a ton and the powder at from $80 to $100 a ton.

BLEACHING POWDER.—The situation in the bleaching powder market is normal for this time of the year and trading is mostly along seasonal lines. Stocks are moving into consumption rapidly enough to prevent any accumulation. Prices are quite steady and the impression seems to prevail that current values will be maintained. Prices still rule from $1.90 to $2.30 per 100 pounds, in large drums, at works.

CAUSTIC SODA.—Much activity was experienced in the caustic soda market. The tone of the market is steady and prices are well maintained at all selling quarters. Deliveries are in large volume and contract withdrawals are on a large scale. Manufacturers have been moving goods as rapidly as available and no surplus stocks have accumulated. Prices continue firm at from $3.10 to $3.15 per 100 pounds, at works.

CASEIN.—An improved demand is being experienced for casein and inquiries are fairly numerous. The number of orders being booked is larger than for some time past. There are occasions when the prices for casein are being shaded, but the market generally is quoting 13 cents a pound.

CHINA CLAY.—The China clay market continues practically unchanged. A satisfactory amount of business is being transacted and trading is on a firm basis. Prices remain steady and in all probability will be well maintained for some considerable time. Imported grades are quoted at from $16 to $20 a ton and the domestic grades are bringing from $12 to $15 a ton.

CHLORINE.—While the market for chlorine presents nothing new, the demand has been along fairly active lines. Contract withdrawals have been satisfactory and manufacturers are optimistic regarding future prospects. Prices remain firm at from 4 to 4½ cents per pound, in tanks, at works.

ROSIN.—The rosin market is generally strong, and all grades have been marked up. Demand in the local market holds up well and there is also an improved inquiry from the South. Developments in that section have helped to strengthen the situation here. Clearances from seaboard markets have been more numerous than for some time. Much competition has developed for supplies. The naval stores centers are now quoting it at from $15.50 to $15.75, ship side, in barrels of 280 pounds.

SALT CAKE.—Inquiries for salt cake are growing and the strength of the market is greatly improved. Many buyers have been forced to replenish their supplies, as their stocks were low. Manufacturers are awaiting the new contract season with increased confidence. The quoted price for salt cake remains at from $20 to $22 a ton, in bulk, at works.

SODA ASH.—The situation in the soda ash market has greatly improved of late. There is much interest being evidenced regarding the prices for 1926, but any radical changes are not anticipated. The consumption of soda ash is large at present and the demand will undoubtedly be very strong in the near future. The quoted price ranges from 1.38 to 1.63 cents a pound in bulk, at works.

SULPHATE OF ALUMINA.—There has been a revival in the demand for sulphate of alumina, and spot buying has greatly improved. A fair amount of contract business is also being transacted. Altogether, the market is stronger than for some time past. Commercial grades are quoted at from 1.40 to 1.50 cents a pound at Eastern Works, and the iron free is selling at from 2 to 2.35 cents a pound.

SULPHUR.—The sulphur market continues quite steady in tone and a good routine movement is noticed. Contract quotas are being taken out in a satisfactory manner. Inquiries are growing steadily and the demand is most persistent. The price is quoted at from $19 to $20 a ton in bulk, ship side, and $15 to $16 a ton, at mine.

TALC.—Very little change has taken place in the talc market situation of late. The demand is normal for this time of the year and prices show little inclination to fluctuate. Prevailing quotations rule at from $17 to $18 a ton, according to grade.

Laurentide Effecting Economies

MONTREAL, Que., September 28, 1925.—At the annual meeting of the Laurentide Company, held in Montreal, George Chahoon, Jr., the president, referring to the general situation of the Company, said:

"We have gone through the year with a slight over-production of newsprint that has necessitated a certain amount of curtailment in production, and our products have sold at a slightly lower price than the year before. I am glad to say, however, that economies in operation have very largely offset the reduced prices for the product and any shrinkage in revenue has been almost entirely due to curtailment in production. We feel that there will be over-production until consumption catches up and meets the development plans of the industry. Therefore, as we have said in the last paragraph of the report, we deem it most advisable to be conservative in the operation of the property during the coming year.

Referring to the company's reforestration policy, Mr. Chahoon said that 6,000,000 trees had been planted during the year. He explained that the planting was done for the most part by machinery and that the total cost of all these operations, including the nurseries and transplanting, did not exceed $75,000 to $80,000. He went on to declare that within the next twenty years the Laurentide policy of reforestration would amply justify itself. When the programme was completed, if there was courage to carry it out, the company would have an ample supply of pulpwood within 25 miles of the plant. Indeed, the security of the supply for the mills would be like going out and filling "the old wood box." The trees were being planted on farmlands that the company had been compelled to take over after they had been flooded through the building of the dam in connection with the Laurentide Power Company's plant.

The annual report was adopted and the election of directors resulted in the old board being reappointed, with Mr. Chahoon as president once more.

Ezra Levin Now With Lord Baltimore Press

BALTIMORE, Md., September 28, 1925.—Ezra Levin, previously research chemist for the Kalamazoo Vegetable Parchment Company and director of research for Folding Box Manufacturers National Association, is now associated with the Lord Baltimore Press, Baltimore.

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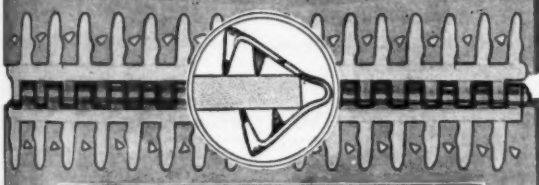

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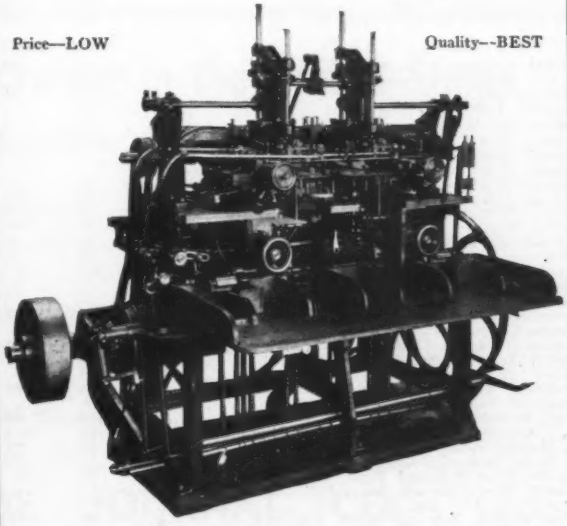
"Every Tooth A Vise"

For Every Size and Kind of Belt

F. L. SMITHE MACHINE CO., INC.
633 W. 44 ST. NEW YORK, N. Y.

Designers and Manufacturers of Automatic Machinery
Invention, Development Work, Consulting.
Specialists in Paper Handling Machines.
Estimates on Large or Small Jobs.

Price—LOW Quality—BEST



Champion Twin Plunger Type Envelope Folding Machine
IF YOU NEED SPECIAL MACHINERY—WE BUILD IT

Market Quotations

Quoted by Hepburn & Co., No. 74 Broadway, N. Y. City, to whom all inquiry for quotations on these or any other Securities is referred.

BONDS	BID	OFFERED
Abitibi Power and Paper, Gen. 6s 1940	101	103*
Advance Bag and Paper, 7s 1943	98	100*
Bastrop Pulp and Paper, 7½s 1932	104	108*
Brompton Pulp and Paper, 6s 1927	94	96
Beaver Board, 8s 1933	92	94
Bedford Pulp and Paper, 6½s 1942	98	...
Berkshire Hills Paper Co., 8s 1941	...	80
Beaver Board, N. Y. Curb, 8s 1933	93	95
Beaver Products Corp., 7½s 1942	104	106
Belgo Canadian Paper, 6s 1943	100	101
Brown Paper Co., 8s 1931	102	...
Berlin Mills, 5s 1931	98	...
Bryant Paper Co., 6s 1942	99	102*
Brown Company Serial, 6s 1925-43	97	100
Central Paper 6½s 1925-42	91	94
Cape Breton Pulp and Paper, 6s 1932	100	...
Carthage Sulphite Pulp and Paper, 8s 1941	40	50
Champion Coated Paper Co., 6s 1924-34	...	102
Champion Fibre Co. Notes, 8s 1930	101	...
Cherry River Paper, 5s 1929	98	100*
Donnaconna Paper Co., Ltd., 6s 1940	99	101
Eddy Paper, 7½s 1931	97	...
Eagle Paper, 6½s 1932	96	100
Escanaba Paper, 6s 1933	87	95*
Fox River Paper, 7s 1931	100	...
Fort Orange Paper Co., 7s 1942	95	99
Eddy Paper Co., 7½s 1931	95	...
Gilbert Paper Co., 7s 1927	96	...
Gilbert Paper Co., 6½s 1923-29	101	102*
Hammermill Paper Co., 6s 1930-39	99	...
Hercules Corp'n, 8s 1936	100	...
Hummell, Ross Fibre Corp., 7s 1925	90	...
Jessup & Moore Paper Co., 6s 1939	75	85
Kenmore Pulp and Paper Co., 6s 1937	90	...
Lake Superior Pulp and Paper, 6s 1941	105	...
Mattagami Pulp and Paper, 6s 1937	90	...
Marinette & Menominee, 7½s 1936	104	...
National Paper and Type, 6s 1947	96	99*
Oswego Falls Corp., 8s 1942	102	105
Orono Pulp and Paper, 5s 1941	93	96*
Orono Pulp and Paper, 6s 1943	97	100*
Oxford Paper Co., 6s 1947	101	...
Paterson Parchment Paper, 5½s 1927-28	98	100
Paterson Parchment, 6s 1938	98	100
Parker Young Co., 6½s 1944	92	96
Price Bros. & Co. Ltd., 6s 1943	100	102
Provincial Paper Mills, Ltd., 6s 1940	97	...
Riordon Co., Series A. 8s 1940	115	118
Riordan Paper, 6s 1924	99	101
Riordan Pulp and Paper, Ltd., 6s, 1929	33	35
River Raisin Paper, 8s 1936	104	106
St. Maurice Paper Co., Ltd., 5½s, 1929	98¼	99¾
St. Regis Paper, 6½s, 1929-35	97	102
Smith (Howard) Paper Mills, 7s 1941	98	100
Smith (Howard) Paper Mills, 6s 1934	98	...
St. Croix Paper, 5s 1923-37	95	...
Stevens & Thomson Paper, 6s 1942	86	90
Spanish River Pulp and Paper, 6s 1931	105	108
Spanish River Pulp and Paper, Gen 8s 1941	106	109
Ticonderoga Pulp and Paper Co., 6s, 1940	91	95
Ticonderoga Pulp & Paper 1-5, 1930	88	93
S. D. Warren Company, 6s, 1945	97	100
Whittaker Paper, 1st 7s 1942	96	98
Watab Paper Co., 6½s 1942	100	104
Waterway Paper Products, 7s 1924-27	95	100
Wayagamack Pulp and Paper, Ltd., 6s 1951	87	90

STOCKS	BID	ASKED
Abitibi Power and Paper, Com	65	68
Abitibi Power and Paper, Pfd	103	...
Advance Bag and Paper, Com	8	12*
Advance Bag and Paper, Pfd	77	...
Beaver Board, Com	4	6
Beaver Board, Pfd	32	35
Bryant Paper, Cap	12	...
Bryant Paper, Pfd	9	...
Chicago Mill & Lumber Co., Com	63	...
Chicago Mill & Lumber Co., Pfd	98	104
Crown Williamette, Com	93	98*
Crown Williamette, 7% A, Pfd	98	SW
Donnaconna Paper, Com	42	48
Donnaconna Paper, Pfd	93	98*
Great Northern Paper, Cap	260	270
Jessup & Moore Paper, Pfd	75	80
International Paper Co., Com	68	70
International Paper Co., Pfd. 6%	75	80
Mengel Company, Com	67	70
Mengel Company, Pfd	83	93
Oxford Papers, Com	93	97
Oxford Paper Co., Pfd	98	...
Provincial Paper Co., Com	94	98
Provincial Paper Co., Pfd	99	...
Price Brothers, Cap	39	40
St. Croix Paper	185	215
St. Maurice Paper Co., Cap	82	85
St. Regis Paper Co., Cap	54	56
Spanish River Pulp and Paper, Com	99	101
Spanish River Pulp and Paper, Pfd	112	...
Ticonderoga Pulp and Paper, Cap	145	...
West Virginia Pulp and Paper, Cap	44	47
West Virginia Pulp and Paper, Pfd	95	100
Whittaker Paper, Com	30	40
Whittaker Paper, Pfd	60	70

* Nominal.

Paper

(F. o. b. Mill)

Ledgers	11.00	@38.00
Bonds	9.00	@45.00
Writings—		
Extra Superfine	14.00	@32.00
Superfine	14.00	@32.00
Tub Sized	10.00	@15.00
Engine Sized	8.00	@11.00
News—		
Rolls, contract	3.50	@ 3.90
Rolls, transit	3.75	@ 4.25
Sheets	4.00	@ 4.25
Side Runs	3.25	@ 4.00
Book, Cased—		
S. & S. C.	7.00	@ 9.75
M. F.	6.25	@ 8.75
Coated and Enamel	8.00	@15.00
Lithograph	8.00	@15.00
Tissues—Per Ream		
White No. 1	.70	@ .90
Anti-Tarnish	1.10	@ 1.90
Colored	1.00	@ 2.00
White No. 2	.65	@ .75
Kraft	.85	@ .95
Manila	.70	@ .80
Kraft—		
No. 1 Domestic	5.75	@ 6.25
No. 2 Domestic	5.10	@ 5.50
Southern	4.75	@ 5.00
Imported	5.50	@ 5.75
Manila—		
No. 1 Jute	9.00	@ 9.25
No. 2 Jute	7.75	@ 8.50
No. 1 Wood	4.75	@ 5.25
No. 2 Wood	4.00	@ 4.50
Butchers	3.75	@ 4.25
Fibre Papers—		
No. 1 Fibre	4.50	@ 5.00
No. 2 Fibre	4.25	@ 4.75
Common Bogus	2.50	@ 2.75
S. Screening	3.00	@ 3.50
Card Middles	4.00	@ 5.00
Boards—per ton—		
News	45.00	@47.50
Straw	57.00	@60.00
Chip	42.00	@45.00
Binders' Boards	72.50	@77.50
Sgl. Mla. Ll. Chip	58.00	@60.00
Wood Pulp	70.00	@75.00
Container	62.50	@67.50
Sulphate Screenings—		
Coarse	.75	@ .85
Refined	1.75	@ 2.00
Ground Wood—		
Screenings	20.00	@25.00
Glassine—		
Bleached, basis 25 lbs.	13.00	@16.00
Bleached, basis 20 lbs.	15.00	@16.00

Mechanical Pulp

(Ex-Dock)

No. 1 Imported	33.00	@37.00
(F. o. b. Mill)		
No. 1 Domestic	28.00	@32.00

Chemical Pulp

(Ex-Dock, Atlantic Ports)

Sulphite (Imported)—		
Bleached	4.00	@ 4.50
Easy Bleaching	3.10	@ 3.40
No. 1 strong unbleached	2.90	@ 3.25
No. 2 strong unbleached	2.65	@ 2.85
No. 1 Kraft	2.95	@ 3.20
Sulphate—		
Bleached	3.75	@ 4.00
(F. o. b. Pulp Mill)		
Sulphite (Domestic)—		
Bleached	3.85	@ 4.50
Easy Bleaching Sulphite	3.00	@ 3.25
News Sulphite	2.55	@ 2.80
Mitscherlich	3.25	@ 3.75
Kraft (Domestic)	3.00	@ 3.25
Soda Bleached	4.00	@ 4.25

Domestic Rags

New Rags

Prices to Mill f. o. b. N. Y.

Shirt Cuttings—		
New White, No. 1	14.25	@15.00
New White, No. 2	8.00	@10.00
Silesias No. 1	10.50	@11.50
New Unbleached	14.00	@15.00
Washables	6.50	@ 9.25
Fancy	9.75	@10.25
Blue Overall	11.50	@11.75
New Blue Prints	7.50	@ 8.50
New Soft Blacks	5.75	@ 6.20
Mixed Khaki Cuttings	7.00	@ 8.00
Pink Corset Cuttings	10.25	@10.75
Pink Muslin	10.00	@10.50
New Light Seconds	3.25	@ 3.50
O. D. Khaki Cuttings	7.00	@ 8.00
Men's Corduroy	6.25	@ 6.75
New Mixed Blacks	4.00	@ 4.50
Old Rags		
White, No. 1—		
Repacked	6.50	@ 7.50
Miscellaneous	6.50	@ 7.00
White, No. 2—		
Repacked	4.00	@ 4.25
Miscellaneous	3.50	@ 3.75
St. Soiled, White	2.90	@ 3.00
Thirds and Blues—		
Repacked	3.75	@ 4.00
Miscellaneous	3.00	@ 3.25
Black Stockings	3.75	@ 4.25
Roofing Rags—		
Cloth Str.ppings	2.35	@ 2.45
No. 1	2.35	@ 2.45
No. 2	2.40	@ 2.50
No. 3	2.10	@ 2.20
No. 4	2.00	@ 2.10
No. 5A	1.50	@ 1.75

Foreign Rags

New Light Silesias	10.50	@11.25
Light Flannelettes	10.50	@12.00
Unbleached Cottons	13.50	@15.00
New White Cuttings	13.50	@15.00
New Light Oxfords	10.50	@11.50
New Light Prints	9.00	@10.00
New Mixed Cuttings	4.25	@ 4.50
New Dark Cuttings	4.00	@ 4.50
No. 1 White Linens	10.00	@11.00
No. 2 White Linens	7.25	@ 8.25
No. 3 White Linens	6.25	@ 6.75
No. 4 White Linens	4.50	@ 5.50
Old Extra Light Prints	4.25	@ 4.5
Ord. Light Prints	3.25	@ 3.75
Med. Light Prints	2.50	@ 3.00
Dutch Blue Cottons	3.50	@ 4.00
Ger. Blue Cottons	3.00	@ 3.25
Ger. Blue Linens	4.25	@ 4.75
Checks and Blues	3.25	@ 3.50
Linsay Garments	2.40	@ 2.50
Dark Cottons	2.25	@ 2.35
Shoppery	2.20	@ 2.30
French Blues	3.75	@ 4.25

Bagging

Prices to Mill F. o. b. N. Y.

Gunny No. 1—		
Foreign	3.15	@ 3.25
Domestic	3.15	@ 3.25
Wool Tares, light	2.65	@ 2.75
Wool, Tares, heavy	2.70	@ 2.80
Bright, Bagging	2.55	@ 2.65
Mixed Bagging	2.30	@ 2.40
Sound Bagging	2.10	@ 2.20
Roofing Bagging	1.90	@ 2.00
Small Mixed Rope	2.00	@ 2.25
Manila Rope—		
Foreign	5.50	@ 6.00
Domestic	6.50	@ 7.00
New Bu. Cut	3.60	@ 3.85
Hessian Jute Threads—		
Foreign	4.00	@ 4.25
Domestic	3.25	@ 3.50

Old Waste Papers

(F. o. b. New York)

Shavings—		
Hard, White, No. 1	3.50	@ 3.70
Hard, White, No. 2	3.25	@ 3.50
Soft, White, No. 1	2.80	@ 2.90
Flat Stock—		
Stitchless	1.45	@ 1.55
Overissue Mag	1.25	@ 1.40
Solid Flat Book	1.25	@ 1.40
Crumpled No. 1	1.25	@ 1.35
Solid Book Ledger	1.70	@ 1.80
Ledger Stock	1.40	@ 1.50
New B. B. Chips	.65	@ .75
Manilas—		
New Env. Cut	2.25	@ 2.40
New Cut. No. 1	1.85	@ 2.25
Extra No. 1 old	1.40	@ 1.50
Print	1.20	@ 1.30
Container Board	.70	@ .90
Bogus Wrapper	1.00	@ 1.10
Old Krafts Machine compressed bales	2.00	@ 2.10
News—		
No. 1 White News	1.85	@ 2.00
Strictly Overissue	1.05	@ 1.15
Strictly Folded	.75	@ .85
No. 1 Mixed Paper	.65	@ .70
Common Paper	.50	@ .55

Twines

Cotton—(F. o. b. Mill)—		
No. 1	.42	@ .45
No. 2	.41	@ .43
No. 3	.40	@ .42
India, No. 6 basis—		
Light	.19	@ .20
Dark	.17	@ .19
B. C., 18 basis	.39	@ .41
A. B. Italian, 18 Basis	.56	@ .61

"EASTCO"

BLEACHED SULPHITE

Using "Eastco" Bleached Sulphite ourselves, testing it day by day, in producing our line of "Eastco" Fine Writing Papers, we have complete control—because we have complete knowledge—of its quality, uniformity and adaptability to the requirements of the paper maker.

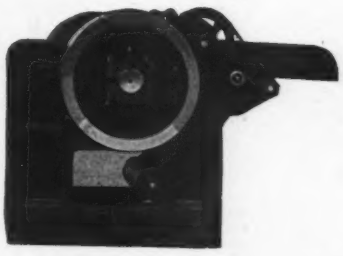
"Eastco" Bleached Sulphite is good pulp; it makes good paper. Furnished in Bales, Rolls or Laps as required. Write for Samples and Prices.

EASTERN MANUFACTURING COMPANY
292 MADISON AVENUE - NEW YORK CITY

ATTERBURY BROS.
(INCORPORATED)
WOOD PULP, RAGS AND PAPER STOCK, FRENCH CASEINE
145 NASSAU STREET (Potter Bldg.) NEW YORK

A. J. BRADLEY MFG. COMPANY
Oiled Stencil Board

Lamp Shade Parchment
IN A VARIETY OF GRADES AND COLORS
101 BEEKMAN STREET NEW YORK



GIANT

RAG CUTTERS

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Riegelsville, N. J.

A History of Paper Manufacturing in the United States

By LYMAN HORACE WEEKS

Author of "An Historical Digest of the Provincial Press," "Legal and Judicial History of New York," "Prominent Families of New York," "Book of Bruce," etc., etc.

A comprehensive story of the paper making industry in this country from its small beginnings in 1690. All the material facts gathered into one complete, compact narrative. Illustrated.

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Finished Jute—			
Dark, 18 basis...	.30	@	.31
Light, 18 basis..	.28	@	.30
Jute Wrapping, 3-6 Ply—			
No. 1	.21	@	.23
No. 2	.21	@	.23
Tube Rope—			
[illegible] and larger..	.15½	@	.17½
Fine Tube Yarn—			
[illegible]ly and larger..	.20	@	.28
4-ply	.21	@	.24
3-ply	.22	@	.25
Unfinished India—			
Basis	.14½	@	.15½
Paper Makers' Twine			
Balls	.12	@	.13
Box Twine, 2-3 ply	.14	@	.15
Jute Rope	.20	@	.40
Ameri. Hemp, 6...	.30	@	.32
Sisal Hay Rope—			
No. 1 Basis	.14	@	.16
No. 2 Basis.....	.10	@	.12
Sisal Lath Yarn—			
No. 1	.14	@	.15
No. 2	.11	@	.13
Manila Rope	.18	@	.19

BOSTON

Paper

Ledgers—			
Sulphite	.08½	@	.18
Rag content	.18	@	.36½
All Rag	.38	@	.50
Bonds—			
Sulphite	.07½	@	.10½
Rag Content.....	.17	@	.45
All Rag	.36½	@	.51
Writings	.08	@	.20
Superfines	.22	@	.50
News	.04	@	.04½
Book, Super	.08	@	.10
Book, Coated	.09	@	.14
Coated Litho.....	.09½	@	.15
Label	.09½	@	.15
Jute Manila No. 1.	.11	@	.12
Manila, Sul. No. 1.	.05	@	.05
Manila, Sul. No. 2.	.03¾	@	.04½
No. 1 Kraft.....	.05¾	@	.06½
No. 2 Kraft.....	.05¼	@	.05½
Common Bogus....	.02½	@	.02¾
Straw Board	—	@	50.00
News Board	—	@	50.00
Chip Board	—	@	47.50
Single Manila Pulp lined board 57.50		@	60.00
Single White, patent coated board 75.00		@	82.50
Wood Pulp Board..80.00		@	85.00
Binder Boards.....75.00		@	85.00
Tarred Felts—			
Regular 61.00		@	63.00
Slaters 66.00		@	68.00
Best Tarred, 1 Ply, roll	1.50	@	1.60
Best Tarred, 2 Ply, roll	1.70	@	1.80
Best Tarred, 3 Ply, roll	2.00	@	2.10

Old Papers

Shavings—			
No. 1 Hard White	4.00	@	3.75
White Blank News	1.75	@	2.00
Manila Env. Cuttings	2.80	@	3.00
No. 2 Hard White	3.25	@	3.50
No. 1 Soft White..	.02¾	@	.03
No. 2 Soft White..	.02½	@	.03
No. 1 Mixed.....	1.60	@	1.75
No. 2 Mixed.....	1.25	@	1.50
Solid Ledger Stock	2.00	@	1.75
No. 1 Books, Heavy	1.25	@	—
No. 1 Books, Light	—	@	1.25
No. 1 New Manila.	2.50	@	2.60
No. 1 Old Manila.	1.75	@	2.00
Print Manila	1.05	@	1.20
Old Kraft	2.25	@	—
Overissue News ...	1.00	@	—
Old Newspapers ...	.70	@	—
No. 1 Mixed Paper	.60	@	.47½
Box Board, Chip..	.60	@	.50

Bagging

Price f. o. b. Boston

Gunny No. 1—			
Foreign	—	@	3.00
Domestic	—	@	3.00
Manila Rope	6.00	@	6.50
Mixed Rope	2.00	@	—
Scrap burlaps ...	—	@	2.37½
Wool Tares, heavy.	2.50	@	2.75
Mixed Strings...	—	@	1.90
New Burlap Cuttings	—	@	3.75

Domestic Rags (New)

Price f. o. b. Boston

Shirt Cuttings—			
New White No. 1	.15½	@	.15
Silesias, No. 1...	.11	@	—
New Unbleached.	.14¼	@	.15
Washable	.07¾	@	.08
Fancy	.10½	@	—
Cottons—According to Grades—Blue—			
Blue overalls.....	12½	@	—
New Black, soft...	.07	@	—
Khaki Cuttings.....	.07	@	—
Corduroy	.04	@	.05
New Canvas	.12	@	.12½

Domestic Rags (Old)

Price f. o. b. Boston

White No. 1 .....10.00		@	—
Repacked	9.50	@	—
Miscellaneous	8.50	@	—
White No. 2—			
Repacked	6.50	@	—
Miscellaneous.....	5.25	@	—
Thirds and Blues—			
Repacked	5.00	@	—
Miscellaneous ...	3.50	@	—
Roofing Stock—			
No. 1	2.75	@	—
No. 2	2.50	@	—
No. 3	1.90	@	—
No. 4.....	2.00	@	—

PHILADELPHIA

Paper

Bonds	.07	@	.40
Ledgers	.11	@	.40
Writings—			
Superfine	.13	@	.18
Extra fine	—	@	.22
Fine	.20	@	.26½
Fine, No. 2.....	.16	@	.25
Fine, No. 3.....	.12	@	.20
[illegible]	.06¾	@	.07
Book, S. S. & C...	.06	@	.07½
Book, Coated	.11	@	.16
Coated Lithograph.	.09	@	.12
Label	.09	@	.12
News	.03¾	@	.04
No. 1 Jute Manila.	.09½	@	—
Manila Sul., No. 1	.04½	@	.06
Manila No. 2.....	.04	@	.04½
No. 2 Kraft.....	.05¼	@	.05¾
No. 1 Kraft.....	.06¼	@	.06½
Common Bogus ...	.02¾	@	—
Straw Board 56.00		@	55.00
News Board 47.50			
Chip Board 50.00			
Wood Pulp Board. (Carload Lots)	4.50	@	5.00
Binder Boards—			
Per ton 75.00		@	80.00
Carload lots 65.00		@	70.00
Tarred Felts—			
Regular 66.00		@	68.00
Slaters 70.00		@	72.00
Best Tarred, 1-ply (per roll)	1.85	@	1.95
Best Tarred, 2-ply (per roll)	1.55	@	1.70
Best Tarred, 3-ply.	2.10	@	2.15

Bagging

F. o. b. Phila.

Gunny, No. 1—			
Foreign	3.00	@	3.25
Domestic	3.00	@	3.25
Manila Rope	4.75	@	6.00
Sisal Rope	2.50	@	—
Mixed Rope	1.00	@	1.25
Scrap Burlaps...	2.25	@	2.50
Wool Tares, heavy.	2.00	@	2.13
Mixed Strings..	1.25	@	—
No. 1, New Lt. Burlap	3.50	@	3.75
New Burlap Cuttings	3.25	@	3.50

Old Papers

F. o. b. Phila.

Shavings—			
No. 1 Hard White	3.50	@	3.60
No. 2 Hard White	3.00	@	3.25
No. 1 Soft White	2.60	@	2.70
No. 2 Soft White	2.00	@	2.20
No. 1 Mixed....	1.50	@	1.60
No. 2 Mixed....	1.00	@	1.10
Solid Ledger Stock.	1.75	@	1.90
Writing Paper	1.60	@	1.65
No. 1 Books, heavy	1.30	@	1.40
No. 2 Books, light.	1.20	@	1.25
No. 1 New Manila.	1.80	@	2.00
No. 1 Old Manila..	1.60	@	1.75
Print Manila.....	1.25	@	1.35
Container Manila..	1.00	@	1.10
Old Kraft	2.00	@	2.10
Over issue News...	1.00	@	1.10
Old Newspaper....	.70	@	.75
No. 1 Mixed Paper	.65	@	.70
Common Paper....	.50	@	.60
Straw Board, Chip.	.60	@	.65
Binders Bd., Chip..	.60	@	.65

Domestic Rags—New

Price to Mill, f. o. b. Phila.

Shirt Cuttings—			
New White, No. 1	.13¾	@	.14
New White, No. 2	.06	@	.08
Silesias, No. 1...	.10½	@	.11
New Unbleached.	.14	@	.14½
Washable	.07¼	@	.07¾
Fancy	.09½	@	.10
Cottons—according to grades—			
Blue Overall.....	.11	@	.11½
New Blue.....	.04	@	.04¼
New Black Soft..	.06	@	.06¾
New Light Seconds	.03½	@	.03¾
Khaki Cuttings..	.06½	@	.07
Corduroy	.04	@	.04½
New Canvas	.08¼	@	.09
New Black Mixed	.05	@	.05½

Old

White, No. 1—			
Repacked	6.75	@	7.00
Miscellaneous ...	6.25	@	6.50
White, No. 2—			
Repacked	.05	@	.05¼
Miscellaneous ...	.04¼	@	.05
Thirds and Blues—			
Repacked	3.75	@	4.00
Miscellaneous ...	3.15	@	3.25
Black Stockings.	4.25	@	4.50
Roofing Stock—			
No. 1	2.00	@	2.15
No. 2	1.90	@	2.00
No. 3	1.25	@	1.35
No. 4	1.10	@	1.20
No. 5A	1.10	@	1.15
B	1.05	@	1.10
C	1.00	@	1.05

TORONTO

Paper

(Mill Prices to Jobbers f. o. b. Mill)

Bond—			
Sulphite	.10½	@	.12½
Light tinted	.11	@	.13½
Dark tinted	.12½	@	.15
Ledgers (sulphite).	—	@	.13
Ledgers No. 1.....	.36	@	—
Ledgers No. 2.....	.27	@	—
Writing	.09½	@	
Writing S. C.	.10	@	
News f. o. b. Mills—			
Rolls (carloads)..	3.50	@	—
Sheets (carloads).	—	@	4.25
Sheets (2 tons or over)	—	@	4.60
Book—			
No. 1 M. F. (carloads)	8.00	@	—
No. 2 M. F. (carloads)	7.50	@	—
No. 3 M. F. (carloads)	7.00	@	—
No. 1 S. C. (carloads)	8.50	@	—
No. 2 S. C. (carloads)	8.00	@	—
No. 3 S. C. (carloads)	7.50	@	—
No. 1 Coated and litho 14.50		@	—
No. 2 Coated and litho 13.50		@	—
No. 3 Coated and litho 12.75		@	—
Coated tinted	.15	@	—
Wrapping—			
Rag Brown	4.75	@	—
White Rag	5.25	@	—
"B" Manila	5.50	@	—
No. 1 Manila ...	6.50	@	—
Fiber	6.50	@	—
Kraft, M. F.....	7.00	@	—
M. G.	7.15	@	—

Pulp

(F. o. b. Mill)

Ground wood 27.00		@	33.00
Sulphite easy bleaching 60.00		@	65.00
Sulphite news grade 56.00		@	60.00
Sulphite, bleached 78.00		@	90.00
Sulphate 67.50		@	70.00

Old Waste Paper

(In carload lots, f. o. b. Toronto)

Shavings—			
White Env. cut..3.65		@	—
Soft White Book shavings	—	@	3.15
White Blk. News 1.70		@	—
Book and Ledger—			
Flat Magazine and Book Stock (old)1.25		@	—
Light and Crumpled Book Stock 1.10		@	—
Ledgers and Writings	1.40	@	—
Solid Ledgers ...	1.40	@	—
Manilas—			
New Manila Cut.	—	@	1.60
Printed Manilas..	1.10	@	—
Kraft	2.25	@	—
News and Scrap—			
Strictly Overissue	.90	@	—
Folded News ...	.90	@	—
No. 1 Mixed Papers	.70	@	—

Domestic Rags—

Price to mills, f. o. b. Toronto Per lb.

No. 1 White shirt cuttings	.14½	@	.14¾
No. 2 White shirt cuttings	.08	@	.08½
Fancy shirt cuttings	.09¾	@	.10
No. 1 Old Whites..	—	@	—
Third and blues...	—		—

Galesburg Box Co. Starts

[FROM OUR REGULAR CORRESPONDENT]

KALAMAZOO, Mich., September 26, 1925.—The Galesburg Paper Box Company, located at Galesburg, in the building formerly occupied by the Hodges Chain Company, is now in production and doing a large and steadily increasing business in the manufacture of folding boxes for all types of baked goods and similar sizes. It is planned later to take on the manufacture of clothes boxes.

The plant is a one story structure, 45 x 140 feet in dimensions, is well equipped and will eventually require a force of 25 employees to operate it. Not only does it house all the equipment of the Standard Press Company, formerly of this city, but a deal has just been closed for the purchase of $20,000 to $25,000 equipment from a concern at Geneva, Ill. All this equipment is to be transferred to the Galesburg factory, giving it two 72-inch presses and putting it in position to engage profitably in the manufacture of large folding paper boxes.

The Galesburg Paper Box Company is capitalized at $25,000. The officers at this time are: President, M. H. Lane; vice president, Carl Williams; secretary-treasurer, C. H. Gleason; general manager, H. W. Braun. These four and Chauncey Hodges constitute the board of directors. Secretary Gleason reports that the new company is now working on 50 excellent contracts and that during the past week orders for hundreds of thousands of boxes have been received.